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UNITED STATES DEPARTMENT OF THE INTERIOR

SURFACE WATER SUPPLY  
*of the* UNITED STATES  
1936

PART 10  
THE GREAT BASIN

Prepared in cooperation with the States of  
CALIFORNIA, IDAHO, NEVADA, OREGON, UTAH, and WYOMING

GEOLOGICAL SURVEY WATER-SUPPLY PAPER 810



UNITED STATES DEPARTMENT OF THE INTERIOR  
HAROLD L. ICKES, Secretary  
GEOLOGICAL SURVEY  
W. C. MENDENHALL, Director

Water-Supply Paper 810

SURFACE WATER SUPPLY  
*of the* UNITED STATES  
1936

PART 10  
THE GREAT BASIN

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Prepared in cooperation with the States of  
CALIFORNIA, IDAHO, NEVADA, OREGON, UTAH, and WYOMING



Water Resources  
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CONTENTS

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	Page
Scope of work.....	1
Definition of terms.....	1
Explanation of data.....	1
Accuracy of field data and computed results.....	2
Publications.....	3
Records of discharge collected by agencies other than the Geological Survey.....	7
Cooperation.....	7
Division of work.....	8
Gaging-station records.....	9
Great Salt Lake Basin.....	9
Gages on Great Salt Lake, Utah.....	9
Bear River Basin.....	10
Bear River near Evanston, Wyo.....	10
Bear River at Harer, Idaho.....	11
Bear River at Alexander, Idaho.....	12
Bear River near Weston, Idaho.....	13
Bear River near Collinston, Utah.....	14
Logan River above State dam, near Logan, Utah.....	15
Utah Power & Light Co.'s tailrace near Logan, Utah.....	16
Logan, Hyde Park & Smithfield Canal near Logan, Utah.....	17
Blacksmith Fork above Utah Power & Light Co.'s dam near Hyrum, Utah.....	18
West Side Canal near Collinston, Utah.....	19
Hammond (East Side) Canal near Collinston, Utah.....	20
Devil Creek near Malad, Idaho.....	21
Deep Creek below First Creek, near Malad, Idaho.....	22
Weber River Basin.....	23
Weber River near Oakley, Utah.....	23
Weber River near Coalville, Utah.....	24
Echo Reservoir at Echo, Utah.....	25
Weber River at Echo, Utah.....	26
Weber River at Devils Slide, Utah.....	27
Weber River at Gateway, Utah.....	28
Weber River near Plain City, Utah.....	29
Chalk Creek at Coalville, Utah.....	30
South Fork of Ogden River near Huntsville, Utah.....	31
Ogden River near Ogden, Utah.....	32
Jordan River Basin.....	33
Jordan River at Narrows, near Lehi, Utah.....	33
Salt Creek near Nephi, Utah.....	34
Provo River at Forks, Utah.....	35
Weber-Provo diversion canal near Woodland, Utah.....	36
South Fork of Provo River at Forks, Utah.....	37
Sevier Lake Basin.....	38
Sevier River near Kingston, Utah.....	38
Pinto Reservoir near Marysvale, Utah.....	39
Sevier River below Pinto Dam, near Marysvale, Utah.....	40
Sevier River near Vermilion, Utah.....	41
Sevier River below San Pitch River, near Gunnison, Utah.....	42
Sevier Bridge Reservoir near Juab, Utah.....	43
Sevier River near Juab, Utah.....	44
East Fork of Sevier River near Kingston, Utah.....	45
Beaver River Basin.....	46
Beaver River near Beaver, Utah.....	46
Beaver River at Adamsville, Utah.....	47
Beaver River at Rockyford Dam, near Minersville, Utah.....	48
Escalante Desert Basin.....	49
Coal Creek near Cedar City, Utah.....	49
Salton Sea Basin.....	51
Salton Sea, Calif.....	51
Palm Canyon Creek near Palm Springs, Calif.....	52
Mojave River Basin.....	53
Deep Creek near Hesperia, Calif.....	53
Mojave River at Victorville, Calif.....	54
Mojave River at Barstow, Calif.....	55
West Fork of Mojave River near Hesperia, Calif.....	55
Antelope Valley Basin.....	56
Rock Creek near Valyermo, Calif.....	56
Owens Lake Basin.....	57
Owens River near Round Valley, Calif.....	57
Owens River at Pleasant Valley, near Bishop, Calif.....	58
Owens River near Big Pine, Calif.....	59
Rock Creek at Sherwin Hill, near Bishop, Calif.....	60
Rock Creek near Round Valley, Calif.....	61
Pine Creek at division box, near Bishop, Calif.....	62
Pine Creek near Round Valley, Calif.....	63
Mono Lake Basin.....	64
Mono Lake near Mono Lake, Calif.....	64

Gaging-station records--Continued.	
Walker Lake Basin.....	64
Walker Lake near Hawthorne, Nev.	64
Bridgeport Reservoir near Bridgeport, Calif.	65
East Walker River near Bridgeport, Calif.	66
West Walker River near Coleville, Calif.....	67
Topaz Reservoir near Topaz, Calif.	68
Humboldt-Carson Sink Basin.....	69
Carson River Basin.....	69
East Fork of Carson River near Gardnerville, Nev.	69
Carson River near Fort Churchill, Nev.....	70
Humboldt River Basin.....	71
Humboldt River at Palisade, Nev.	71
Humboldt River near Imlay, Nev.....	72
Rye Patch Reservoir near Rye Patch, Nev.	73
Humboldt River near Rye Patch, Nev.....	74
Martin Creek near Paradise Valley, Nev.	75
Humboldt-Lovelock Irrigation, Light & Power Co.'s outlet canal near Humboldt, Nev.....	76
Pyramid and Winnemucca Lakes Basin.....	77
Pyramid Lake near Nixon, Nev.....	77
Lake Tahoe at Tahoe, Calif.....	77
Truckee River at Tahoe, Calif.....	78
Truckee River at Iceland, Calif.....	79
Donner Creek near Truckee, Calif.....	80
Warner Lakes Basin.....	81
Deep Creek above Adel, Oreg.....	81
Albert Lake Basin.....	82
Chewaucan River above Conn Ditch, near Paisley, Oreg.....	82
Silver Lake Basin.....	83
Silver Creek near Silver Lake, Oreg.....	83
Silver Lake Irrigation District Canal near Silver Lake, Oreg.....	84
Malheur and Harney Lakes Basin.....	85
Silvies River near Burns, Oreg.....	85
Alvord Lake Basin.....	86
Trout Creek near Denio, Oreg.....	86
Miscellaneous discharge measurements.....	87
Index.....	89

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 ILLUSTRATION
 

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Plate 1. Typical river measurement stations.....	Page 2
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SURFACE WATER SUPPLY OF THE GREAT BASIN, 1936

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SCOPE OF WORK

This volume is one of a series of 14 reports presenting results of measurements of flow made on streams in the United States during the year ending September 30, 1936. The work was begun in 1888 in connection with special studies relating to irrigation. Measurements of stream flow have been made at about 7,200 points in the United States and also at many points in Alaska and the Hawaiian Islands. In July 1936, 3,160 gaging stations were being maintained by the Geological Survey and the cooperating organizations. Many miscellaneous discharge measurements were made at other points.

In the execution of the work many State and private organizations have cooperated, either by furnishing data or by assisting in collecting data. Acknowledgments for cooperation of the first kind are made in connection with the description of each station affected; cooperation of the second kind is acknowledged on page 7.

DEFINITION OF TERMS

The units in which stream-flow data are presented in this report and other terms used herein are defined as follows:

"Second-feet" is an abbreviation for "cubic feet per second." A second-foot is the rate of discharge of water flowing in a channel when the cross-sectional area is 1 square foot and the average velocity is 1 foot per second.

"Second-feet per square mile" is the average number of cubic feet of water flowing per second from each square mile of area drained, on the assumption that the run-off is distributed uniformly both as regards time and area.

"Run-off in inches" is the depth to which an area would be covered if all the water flowing from it in a given period were uniformly distributed on the surface. It is used for comparing run-off with rainfall, which is usually expressed in inches.

An "acre-foot", equivalent to 43,560 cubic feet, is the quantity required to cover an acre to the depth of 1 foot. The term is commonly used in connection with storage for irrigation.

"Second-foot-day" is the volume of water represented by a flow of 1 second-foot for 24 hours.

"Stage-discharge relation" is an abbreviation for the term "relation of gage height to discharge."

"Control" is a term used to designate the natural section or reach of the channel or artificial structure below the gage which determines the stage-discharge relation at the gage.

EXPLANATION OF DATA

The base data collected at gaging stations consist of records of stage, measurements of discharge, and general information used to supplement the gage heights and discharge measurements in determining the daily flow. The records of stage are obtained either

## ACCURACY OF FIELD DATA AND COMPUTED RESULTS

from direct readings on a nonrecording gage or from a water-stage recorder that gives a continuous record of the fluctuations. Measurements of discharge are made with a current meter by the general methods outlined in standard textbooks on the measurement of river discharge. Typical gaging stations, equipped with water-stage recorder and measuring cable and car, are shown on plate 1.

Rating tables giving the discharge for any stage are prepared from the discharge measurements. The application of the daily gage height to these rating tables gives the daily discharge from which the monthly and yearly mean discharge is computed.

The data presented for each gaging station in the area covered by this report usually comprise a description of the station, a table showing the daily discharge of the stream, and a table of monthly and yearly discharge and run-off. Skeleton rating tables are published except for those stations whose daily discharge for the greater part of the year was determined by shifting-control method or by use of slope or other special methods.

The description of the station gives the type of gage, its latitude and longitude determined from the best available maps, and information in regard to diversions that decrease the flow at the gage, artificial regulation from pondage or storage, and the accuracy of the records. Under "Average discharge" is given the average discharge for the number of years indicated. It is given only for stations for which there are 10 or more complete years of record. Information under "Extremes" gives the maximum discharge and gage height; the minimum discharge if there is little or no regulation; the minimum daily discharge if there is extensive regulation, and also the minimum discharge if useful; and the minimum gage height except when it is of no importance. Unless otherwise qualified, the maximum discharge corresponds to the crest stage obtained by use of a water-stage recorder or a nonrecording gage read at the time of the crest. Likewise the minimum represents the lowest discharge unless otherwise qualified.

The table of daily discharge gives, for stations equipped with nonrecording gages, the discharge in second-feet corresponding to once-daily or the mean of twice-daily readings of the gage. For stations equipped with water-stage recorders the table gives the discharge corresponding to the mean daily gage height except for stations on streams subject to sudden or rapid fluctuation. For stations subject to such fluctuation the mean daily gage height may not indicate the true mean daily discharge, which must be obtained by averaging the discharge for intervals of the day or by using the discharge integrator, an instrument for obtaining the mean daily discharge from a continuous gage-height graph and containing as an essential element the rating curve of the station.

In the table of monthly discharge the column headed "Second-foot-days" gives the sum for each month of the discharge given in the table of daily discharge. The column headed "Maximum" gives the maximum daily discharge and not the discharge when the water surface was at crest height. Likewise, in the column headed "Minimum" the quantity given is the minimum daily discharge. The column headed "Mean" is the average flow in cubic feet per second during the month.

## ACCURACY OF FIELD DATA AND COMPUTED RESULTS

The accuracy of stream-flow data depends primarily (1) on the permanency of the stage-discharge relation and (2) on the accuracy of observation of stage, measurements of flow, and interpretation of records.

The station description gives a statement in regard to the general accuracy of the records. "Excellent" indicates that, in general, the daily records are accurate within



A. ARTIFICIAL CONTROL, RECORDER HOUSE, AND MEASURING CABLE ON OLEN-TANGY RIVER, DELAWARE, OHIO.



B. RECORDER HOUSE AND MEASURING CABLE ON KAWeah RIVER, THREE RIVERS, CALIF.

TYPICAL RIVER-MEASUREMENT STATIONS.

5 percent; "good", within 10 percent; "fair", within 15 percent; and "poor", within 20 percent or more.

The monthly means for any station may represent with high accuracy the quantity of water flowing past the gage, but the figures showing discharge per square mile and depth in inches may be subject to gross errors caused by the inclusion of large noncontributing districts in the measured drainage area, by lack of information concerning water diverted for irrigation or other use, or by inability to interpret the effect of artificial regulation of the flow of the river above the station. "Second-feet per square mile" and "run-off in inches" are therefore not computed if such errors appear probable. The computations are also omitted for stations on streams draining areas in which the annual rainfall is less than 20 inches.

Many gaging stations on streams in the irrigated areas of the United States are situated above most of the diversions from those streams, and the discharge recorded does not show the water supply available for further development, as prior appropriations below the station must first be satisfied.

The table of monthly discharge gives a general idea of the flow at the station. The table of daily discharge allows more detailed studies of the variation in flow. It should be borne in mind, however, that the observations in each succeeding year may be expected to throw new light on data previously published, and that greater degrees of refinement in computations and records may be warranted with increased data and use of improved equipment.

## PUBLICATIONS

The results of stream-flow measurements are now published annually in 14 parts, each part covering an area whose boundaries coincide with natural drainage features as indicated below:

- Part 1. North Atlantic slope basins (St. John River to York River).
2. South Atlantic slope and eastern Gulf of Mexico basins (James River to Mississippi River).
3. Ohio River Basin.
4. St. Lawrence River Basin.
5. Hudson Bay and upper Mississippi River basins.
6. Missouri River Basin.
7. Lower Mississippi River Basin.
8. Western Gulf of Mexico basins.
9. Colorado River Basin.
10. The Great Basin.
11. Pacific slope basins in California.
12. Pacific slope basins in Washington and upper Columbia River Basin.
13. Snake River Basin.
14. Pacific slope basins in Oregon and lower Columbia River Basin.

Water-supply papers and other publications of the Geological Survey containing data in regard to the water resources of the United States may be obtained or consulted as indicated below.

1. Copies may be purchased at nominal cost from the Superintendent of Documents, Government Printing Office, Washington, D. C., who will, on application, furnish lists giving prices.
2. Sets of the reports may be consulted in the libraries of the principal cities in the United States.
3. Sets are available for consultation in the local offices of the water-resources branch of the Geological Survey as follows:

Augusta, Maine, Statehouse.  
Boston, Mass., 945 Post Office Building.  
Hartford, Conn., 203 Federal Building.  
Albany, N. Y., 526 Federal Building.  
Trenton, N. J., 228 Federal Building.

Harrisburg, Pa., 490 Education Building.  
 Charlottesville, Va., University of Virginia.  
 South Charleston, W. Va., Naval Ordnance Plant.  
 Asheville, N. C., 220 Post Office Building.  
 Columbia, S. C., 119 United States Courthouse.  
 Atlanta, Ga., Georgia School of Technology.  
 Ocala, Fla., Post Office Building.  
 Montgomery, Ala., Post Office Building.  
 Chattanooga, Tenn., 442 Post Office Building.  
 Columbus, Ohio, Engineering Experiment Station, Ohio State University.  
 Indianapolis, Ind., 319 Federal Building.  
 Urbana, Ill., 14 Post Office Annex.  
 Madison, Wis., 337N State Capitol.  
 St. Paul, Minn., 808 New Post Office Building.  
 Iowa City, Iowa, 402 Hydraulic Laboratory, University of Iowa.  
 St. Louis, Mo., 906 Customhouse, 1114 Market Street.  
 Rolla, Mo., Missouri Geological Survey Building, Missouri School of Mines  
 and Metallurgy.  
 Topeka, Kans., 305 Federal Building.  
 Fort Smith, Ark., Post Office Building.  
 Austin, Tex., State Highway Building.  
 Santa Fe, N. Mex., 3 United States Courthouse.  
 Tucson, Ariz., 210 Post Office Building.  
 Denver, Colo., 230 Customhouse.  
 Salt Lake City, Utah, 303 Federal Building.  
 Idaho Falls, Idaho, 228 Federal Building.  
 Boise, Idaho, 429 Federal Building.  
 Helena, Mont., 412 Federal Building.  
 Tacoma, Wash., 406 Federal Building.  
 Portland, Oreg., 606 Post Office Building.  
 San Francisco, Calif., 303 Customhouse.  
 Los Angeles, Calif., 512 Eighth and Figueroa Building.  
 Honolulu, Hawaii, 225 Federal Building.

A list of the Geological Survey publications may be obtained by applying to the Director, Geological Survey, Washington, D. C.

Records of flow of streams in the United States have been published in the reports tabulated as follows:

Stream-flow data in reports of the Geological Survey  
 (A = Annual Report; B = Bulletin; W = Water-Supply Paper)

Report	Character of data	Year
10th A, pt. 2	Descriptive information only.....	1884 to Sept. 1890.
11th A, pt. 2	Monthly discharge and descriptive information.....	1884 to June 30, 1891.
12th A, pt. 2	....do.....	1884 to Dec. 31, 1892.
13th A, pt. 3	....do.....	1888 to Dec. 31, 1893.
14th A, pt. 2	Monthly discharge (long-time records, 1871-93).....	1893-94.
B 131.....	Descriptions, measurements, gage heights, and ratings.	
16th A, pt. 2	Descriptive information only.....	1895.
B 140.....	Descriptions, measurements, gage heights, ratings, and monthly discharge (also many data covering earlier years).	
W 11.....	Gage heights (also gage heights for earlier years)	1896.
18th A, pt. 4	Descriptions, measurements, ratings, and monthly discharge (also similar data for some earlier years).	1895-96.
W 15.....	Descriptions, measurements, and gage heights, eastern United States, eastern Mississippi River, and Missouri River above junction with Kansas River.	1897.
W 16.....	Descriptions, measurements, and gage heights, western Mississippi River below junction of Missouri and Platte Rivers, and western United States.	1897.
19th A, pt. 4	Descriptions, measurements, ratings, and monthly discharge (also some long-time records).	1897.
W 27.....	Measurements, ratings, and gage heights, eastern United States, eastern Mississippi River, and Missouri River.	1898.
W 28.....	Measurements, ratings, and gage heights, Arkansas River and western United States.	1898.
20th A, pt. 4	Monthly discharge (also for many earlier years).	1898.
W 35 to 39...	Descriptions, measurements, gage heights, and ratings.	1899.
21st A, pt. 4	Monthly discharge.....	1899.
W 47 to 52...	Descriptions, measurements, gage heights, and ratings.	1900.
22d A, pt. 4.	Monthly discharge.....	1900.
W 65, 66.....	Descriptions, measurements, gage heights, and ratings.	1901.
W 75.....	Monthly discharge.....	1901.

Note.—The reports which contain records after 1901 are given in the table on page 6.

The records at most of the stations discussed in these reports extend over a series of years. Miscellaneous measurements at many points other than regular gaging stations have been made each year and are published under "Miscellaneous discharge measurements" at the end of each report in the same relative order as the regular gaging stations. An index of the reports containing records obtained prior to 1904 has been published in Water-Supply Paper 119.

The following table gives, by years and drainage basins, the numbers of the papers on surface-water supply published from 1899 to 1936. The data for any particular station will, in general, be found in the reports covering the years during which the station was maintained. For example, data from 1910 to 1920 for any station in the area covered by part 3 are published in Water-Supply Papers 283, 303, 323, 353, 383, 403, 433, 453, 473, and 503, which contain records for the Ohio River Basin for those years. Special papers containing compilation of records previously published and also records not contained in the annual series of water-supply papers have been published for some States and drainage basins. For example, stream-flow records for the New-Kanawha River Basin in part 3 from 1895 to 1920 are contained in Water-Supply Paper 536.



## RECORDS OF DISCHARGE COLLECTED BY AGENCIES OTHER THAN THE GEOLOGICAL SURVEY

The following table contains a list of gaging stations for the area covered by this report at which records of discharge were collected during the year ending September 30, 1936, by agencies other than the Geological Survey. The records for these stations are not contained in publications of the Geological Survey.

Records of discharge collected by agencies other than the Geological Survey

Stream	Location	Period	Operated by	Remarks
Ana River.....	Below dam 6 miles northeast of Summer Lake, Oreg.	1929-36	State engineer.....	1929-30 published in Bulletin 8 of Oregon State engineer; 1931-36 unpublished.
East Canyon Creek.	Morgan, Utah, above reservoir.	1932-36	Weber River water commissioner.	In water commissioner's annual reports.....
Do.....	Morgan, Utah, below reservoir.	1932-36	....do.....	Do.
East Canyon Reservoir.	Morgan, Utah.....	1932-36	....do.....	Do.
Honey Creek.....	1½ miles northwest of Plush, Oreg.	1909-15, 1921-22, 1930-36	State engineer.....	Records to 1922 published in water-supply papers; 1930 published in Bulletin 8 of Oregon State engineer; 1931-36 unpublished.
Ogden River, main branches and other streams tributary to reservoir area..	Huntsville, Utah, above backwater of Pine View Reservoir.	1935-36	U. S. Bureau of Reclamation.	In report of hydrological investigation of Ogden River project.
Ogden River.....	Ogden, Utah, at mouth of canyon.	1935-36	....do.....	Do.
Otter Creek (cutlet).	Antimony, Utah, former U. S. Geological Survey gaging station published as near Coyote.	*1920-36	Sevier River water commissioner.	In water commissioner's annual reports.
Otter Creek Reservoir.	Antimony, Utah, former U. S. Geological Survey gaging station published as near Coyote.	*1915-36	....do.....	Do.
Sevier River.....	Delta, Utah, former U. S. Geological Survey gaging station.	*1920-36	....do.....	Do.
Spanish Fork.....	Cold Springs, Utah, former U. S. Geological Survey gaging station published as at Castilla.	1926-36	Spanish Fork Water Users Association.	In Strawberry Valley project and water commissioner reports.
Spanish Fork.....	Thistle, Utah, former U. S. Geological Survey gaging station.	1926-36	....do.....	Do.
Strawberry Tunnel outlet.	West Portal, Utah.	1913-36	....do.....	Do.
Thompson Valley Reservoir.....	12 miles south of Silver Lake, Oreg.	1922-26, 1930-36	State engineer.....	Records to 1930 published in Bulletin 8 of Oregon State engineer; 1931-36 unpublished.
Wheeler Creek....	Ogden, Utah, near mouth.	1935-36	U. S. Bureau of Reclamation.	In report of hydrological investigation of Ogden River project.

\*Fragmentary.

Note.- Records of discharge are also collected for many canal and ditch diversions, with miscellaneous and fragmentary records for several natural streams. These records are published in water commissioner and project reports for the following river basins: Bear, Beaver, Carson, Humboldt, Jordan, Owyhee, Provo, Spanish Fork, Sevier, Truckee, Walker, and Weber.

## COOPERATION

The work was done under cooperative agreements with the several States as follows: In California with the State Department of Public Works, Earl Lee Kelly, director, and Edward Hyatt, State engineer, and with San Bernardino and Los Angeles Counties; in Idaho with the commission of reclamation, R. W. Faris; in Nevada with the office

## DIVISION OF WORK

of the State engineer, Alfred Merritt Smith; in Oregon with the office of the State engineer, Charles E. Stricklin; in Utah with the office of the State engineer, T. H. Humpherys; and in Wyoming with the office of the State engineer, E. W. Burritt, succeeded by John D. Quinn.

Assistance in collecting records was rendered by the following organizations and corporations: In California by the Walker River Irrigation District; in Utah by the United States Bureau of Reclamation, Utah Power & Light Co. and Logan, Hyde Park & Smithfield Canal Co.

## DIVISION OF WORK

The data for the stations in the several States were collected and prepared for publication under supervision of district engineers as follows: In California (except in Walker Lake Basin), H. D. McGlashan; in Idaho (except those on Bear River), Thomas R. Newell; in Oregon, G. H. Canfield, the work being done in collaboration with Charles E. Stricklin, State engineer; in Utah, Nevada, and stations on Bear River in Idaho and in Walker Lake Basin in California, A. B. Purton; in Wyoming, Robert Follansbee.

## GREAT SALT LAKE BASIN

## Gages on Great Salt Lake, Utah

Location.— Staff gages, lat.  $40^{\circ}46'30''$ , long.  $112^{\circ}10'20''$ , at Saltair, on southeast shore of lake, 15 miles west of Salt Lake City, and at Midlake, lat.  $41^{\circ}13'$ , long.  $112^{\circ}36'$ , on Lucin cut-off of Southern Pacific Railroad 30 miles west of Ogden, Weber County, Utah. Zero of Saltair gage is 4,196.85 feet above mean sea level; zero of Midlake gage is 4,198.0 feet above mean sea level.

Records available.— September 1875 to December 1899, March to July 1904, October 1912 to September 1936 in reports of U. S. Geological Survey; July 1903 to December 1934 in reports of U. S. Weather Bureau.

Extremes.— Maximum elevation during year, 4,195.85 feet June 15 at Saltair gage, also June 1 and 15 at Midlake gage; minimum, 4,193.75 feet Nov. 15 at Saltair gage. 1850-1936: Maximum elevation observed, 4,211.3 feet July 12, 1877; estimated maximum, 4,212.5 feet in 1868 (data furnished by Marcus E. Jones, Salt Lake City); minimum, that of Nov. 15, 1935.

Remarks.— Apparent inconsistencies in readings are probably due largely to the effect of wind, as the two gages are about 40 miles apart. Readings on Midlake gage are furnished by the Southern Pacific Railroad.

Gage height, in feet, of Great Salt Lake, Utah, water year 1935-36

Day	Saltair	Midlake
Oct. 1	-2.7	-3.9
15	-2.85	-4.0
Nov. 1	-3.05	-4.1
15	-3.1	-4.15
Dec. 1	-3.0	-4.1
15	-2.95	-4.0
Jan. 1	-2.9	-4.0
15	-2.75	-3.85
Feb. 1	-2.65	-3.65
15	-2.45	-3.6
Mar. 1	-2.1	-3.15
15	-1.9	-3.0
Apr. 1	-1.85	-2.9
15	-1.65	-2.75
May 1	-1.4	-2.5
15	-1.15	-2.25
June 1	-1.1	-2.15
15	-1.0	-2.15
July 1	-1.15	-2.35
15	-1.3	-2.5
Aug. 1	-1.5	-2.75
15	-1.8	-2.85
Sept. 1	-2.1	-3.25
15	-2.35	-3.4

## BEAR RIVER BASIN

Bear River near Evanston, Wyo.

Location.- Water-stage recorder, lat.  $41^{\circ}19'$ , long.  $111^{\circ}1'$ , in sec. 1, T. 15 N., R. 121 W., 300 feet above highway bridge and  $3\frac{1}{2}$  miles northwest of Evanston.

Drainage area.- 645 square miles.

Records available.- October 1913 to September 1936.

Average discharge.- 23 years, 244 second-feet.

Extremes.- Maximum discharge during year, 2,280 second-feet May 16 (gage height, 5.76 feet); minimum mean daily discharge, 2.7 second-feet Oct. 11, 12, 14. 1913-36: Maximum discharge, 3,690 second-feet June 14, 1921 (gage height, 6.35 feet); no flow during periods in 1924, 1931, 1933, 1934.

Remarks.- Records excellent except those for period of ice effect, Dec. 14 to Apr. 6, which were computed on basis of three discharge measurements, gage heights, and weather records and are fair. Some diversions for irrigation above station.

Rating table, water year 1935-36 (gage height, in feet, and discharge, in second-feet)

0.6	2.0	1.8	145	4.0	1,000
.8	5.8	2.0	192	4.5	1,240
1.0	17	2.5	336	5.0	1,560
1.2	39	3.0	550	5.5	1,920
1.4	69	3.5	775	6.0	2,700
1.6	104				

Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3.4	3.6	22	28	25	48	50	806	1,430	124	226	42
2	3.4	3.6	22	26	24	48	50	716	1,120	104	226	35
3	3.1	4.9	18	26	24	47	60	780	901	66	226	30
4	3.2	4.9	14	26	25	46	58	968	784	34	195	66
5	3.2	4.0	16	28	24	45	60	1,200	824	27	175	100
6	3.5	5.8	17	20	25	44	62	1,380	816	35	168	81
7	3.5	8.9	17	18	28	44	64	1,110	685	34	137	67
8	3.6	6.8	20	19	24	45	63	865	694	30	106	58
9	3.1	6.8	22	26	28	47	72	856	694	27	93	52
10	2.8	5.8	21	32	32	50	91	1,070	626	23	102	47
11	2.7	3.6	30	36	40	56	122	1,360	618	46	173	47
12	2.7	3.6	26	36	42	54	178	1,580	644	302	145	46
13	2.8	3.6	27	34	43	52	236	1,710	676	1,160	143	39
14	2.7	6.3	25	33	44	50	287	1,780	658	586	116	38
15	2.9	5.8	20	33	43	52	340	1,690	622	312	84	38
16	2.9	6.8	15	50	41	56	559	2,050	586	228	72	39
17	3.0	9.4	16	23	40	61	896	1,830	525	202	86	39
18	3.4	14	15	22	36	59	1,260	1,730	469	168	86	34
19	3.5	11	16	26	39	66	1,290	1,600	428	141	66	30
20	3.5	7.9	18	32	40	64	1,220	1,620	347	120	53	30
21	3.4	7.9	22	34	41	59	1,200	1,440	305	104	52	30
22	3.2	8.9	24	36	44	52	1,130	1,140	272	93	55	30
23	3.4	12	25	35	43	48	1,100	1,090	226	79	47	29
24	3.4	15	25	32	41	46	1,080	1,300	210	64	38	27
25	3.4	19	25	30	38	48	1,070	1,250	213	53	30	25
26	3.4	19	28	29	40	52	1,030	1,310	182	42	24	23
27	3.6	12	30	24	42	56	1,000	1,350	154	38	21	23
28	4.0	11	31	26	44	60	901	1,290	152	30	19	23
29	3.6	22	32	24	46	62	892	1,190	175	61	18	21
30	4.5	22	31	23	-	58	838	1,220	156	275	18	20
31	4.5	-	30	24	-	52	-	1,290	-	192	24	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	103.3	4.5	2.7	3.33	205
November.....	275.9	22	3.6	9.20	547
December.....	698	32	14	22.5	1,350
Calendar year 1935 .....	54,452.5	2,000	2.2	149	108,000
January.....	870	36	18	29.1	1,730
February.....	1,046	46	24	36.1	2,070
March.....	1,627	66	44	52.5	3,230
April.....	17,259	1,290	50	575	34,230
May.....	40,771	2,050	716	1,315	80,870
June.....	16,190	1,430	152	540	32,110
July.....	4,800	1,160	23	155	9,520
August.....	3,024	226	18	97.5	6,000
September.....	1,209	100	20	40.3	2,400
Water year 1935-36 .....	87,873.2	2,050	2.7	240	174,300



## Bear River at Alexander, Idaho

Location.— Water-stage recorder, lat.  $42^{\circ}39'$ , long.  $111^{\circ}42'$ , in NW $\frac{1}{4}$  sec. 17, T. 9 S., R. 41 E., 600 feet downstream from Soda hydroelectric plant of Utah Power & Light Co. 0.5 mile southeast of Alexander and 5 miles below mouth of Soda Creek.

Drainage area.— 3,840 square miles.

Records available.— March 1911 to September 1916, April 1919 to September 1936.

Average discharge.— 21 years (1911-16, 1919-20, 1921-36), 844 second-feet.

Extremes.— Maximum daily discharge during year, 2,450 second-feet Apr. 21; minimum, 47 second-feet Dec. 31.

1911-16, 1919-36: Maximum discharge, 4,590 second-feet May 9, 1922; maximum gage height, 15.95 feet Dec. 11, 1919; minimum discharge, about 28 second-feet, when reservoir gates are closed.

Remarks.— Records good. Discharge Oct. 1-14, Oct. 18 to Nov. 29, Jan. 13 to Feb. 18, July 1-7, 18-19, 24-31, Aug. 1-13, Sept. 21-30 computed on basis of kilowatt-hours output of power plant. Numerous diversions for irrigation above station. Regulation caused by storage in Bear Lake Reservoir and operations at Soda hydroelectric plant. Records collected by Utah Power & Light Co., under general supervision of U. S. Geological Survey in connection with a Federal Power Commission project.

## Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	240	160	223	90	115	104	239	988	786	705	640	442
2	190	155	243	130	135	247	350	1,060	832	800	565	508
3	175	145	234	129	155	255	364	1,020	766	775	615	469
4	190	150	183	175	250	213	323	1,020	794	420	630	457
5	245	150	161	131	200	184	301	1,050	824	420	645	446
6	130	210	110	212	250	172	445	1,130	735	755	640	297
7	250	215	180	150	155	161	490	1,230	720	930	570	338
8	120	150	113	191	200	177	270	1,220	672	770	490	458
9	120	230	150	147	155	223	216	1,070	644	832	460	534
10	150	150	181	197	135	225	177	979	651	802	570	480
11	130	130	161	163	260	200	92	945	605	697	535	531
12	100	135	176	60	250	138	52	854	579	478	530	469
13	130	150	194	175	250	177	50	879	554	725	460	381
14	115	215	172	175	225	240	83	979	542	825	426	481
15	121	215	151	175	225	223	81	1,030	517	855	409	416
16	125	215	150	115	135	265	81	1,030	523	730	548	432
17	143	125	172	175	225	245	95	1,110	511	735	535	464
18	130	240	175	135	175	228	1,700	1,160	458	790	529	451
19	140	220	176	95	227	229	1,940	1,000	453	550	523	467
20	130	190	174	115	253	167	2,450	937	458	827	643	361
21	160	200	170	170	227	186	2,450	920	458	865	605	455
22	155	175	150	135	133	223	2,250	808	511	890	511	400
23	155	190	99	135	210	217	2,070	954	560	904	505	285
24	155	160	133	135	312	283	1,680	832	567	675	548	365
25	155	170	91	135	195	222	1,580	779	573	780	576	340
26	130	175	193	95	272	280	1,500	750	605	745	484	385
27	135	170	195	175	279	294	1,170	638	605	860	482	335
28	135	160	201	135	277	291	1,130	598	409	860	490	250
29	130	200	49	155	149	306	1,040	755	691	740	471	250
30	145	184	135	155	—	196	920	624	618	820	515	240
31	140	—	47	175	—	236	—	651	—	650	494	—
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						4,649	245	100	150		9,220	
November.....						5,254	240	125	175		10,420	
December.....						4,942	243	47	159		9,800	
Calendar year 1935.....						137,301	1,150	44	376		272,300	
January.....						4,635	212	60	146		9,000	
February.....						6,049	312	115	208		12,000	
March.....						6,797	306	104	219		15,480	
April.....						25,559	2,450	50	852		50,700	
May.....						28,960	1,230	598	934		57,440	
June.....						18,221	832	409	607		35,140	
July.....						23,190	930	420	748		46,000	
August.....						16,664	645	409	538		33,050	
September.....						12,187	554	240	406		24,170	
Water year 1935-36.....						157,007	2,450	47	429		311,400	

## Bear River near Weston, Idaho

Location.— Water-stage recorder, lat.  $42^{\circ}1'50''$ , long.  $111^{\circ}55'15''$ , in SW $\frac{1}{4}$  SE $\frac{1}{4}$  sec. 17, T. 16 S., R. 39 E., at Weston-Fairview highway bridge 3 miles east of Weston.

Records available.— October 1919 to December 1932, February 1934 to September 1936. Comparable records obtained near Preston, Idaho, October 1889 to January 1917.

Average discharge.— 15 years (1919-32, 1934-36), 1,022 second-feet.

Extremes.— Maximum daily discharge during year, 2,990 second-feet Apr. 22; minimum daily discharge recorded, 128 second-feet June 25.

1919-32, 1934-36: Maximum discharge, 6,100 second-feet May 8 or 9, 1922 (gage height, 12.1 feet); minimum daily discharge, 30 second-feet Apr. 29, 1934.

Remarks.— Records fair. Mean monthly discharge December, January, February, and March based on discharge records at Oneida. West Cache Canal and numerous irrigation ditches divert above station. Regulation caused by storage in Bear Lake Reservoir and operation of power plants above gage. Records furnished by Utah Power & Light Co.

## Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	294	272					782	1,920	648	340	508	456
2	220	265					912	1,860	740	328	474	416
3	235	330					957	1,870	856	334	453	450
4	217	260					1,030	1,890	806	289	471	325
5	339	263					996	1,950	838	268	468	484
6	392	244					852	2,080	803	307	331	441
7	255	306					1,060	1,840	775	589	385	301
8	235	309					1,030	1,760	758	573	420	298
9	263	286					604	1,920	758	545	367	328
10	244	383					856	1,820	758	539	265	494
11	246	258					887	1,720	782	598	325	456
12	286	348					1,000	1,650	524	487	399	450
13	280	277					992	1,660	429	429	386	459
14	220	200					1,200	1,570	508	484	364	435
15	316	354					1,240	1,580	539	848	307	413
16	225	318					1,510	1,630	744	672	250	438
17	249	370					1,640	1,610	651	607	334	398
18	300	348					1,540	1,600	399	487	444	471
19	205	466					2,140	1,590	283	456	379	480
20	263	348					2,860	1,620	247	459	373	435
21	255	336					2,330	1,520	223	586	477	474
22	307	289					2,990	1,360	313	562	402	367
23	288	235					2,830	1,200	432	583	376	536
24	280	364					2,840	1,140	199	648	349	396
25	288	294					2,800	1,140	128	542	410	250
26	283	333					2,470	1,080	289	552	373	340
27	280	327					2,440	845	331	620	450	441
28	274	330					2,160	1,050	744	576	370	480
29	241	330					1,890	904	796	508	349	271
30	266	376					1,920	651	367	645	306	244
31	277	—					—	645	—	524	413	—
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....							8,275	392	205	267	16,410	
November.....							9,397	466	200	313	18,640	
December.....							9,490	—	—	306	18,820	
Calendar year 1935.....							156,236	1,230	31	428	309,900	
January.....							6,610	—	—	310	19,060	
February.....							11,600	—	—	400	23,010	
March.....							13,950	—	—	450	27,670	
April.....							49,378	2,990	604	1,650	97,940	
May.....							46,695	2,080	645	1,510	92,620	
June.....							16,668	856	128	556	33,080	
July.....							15,985	848	268	516	31,710	
August.....							12,079	508	259	390	23,960	
September.....							12,231	536	244	407	24,230	
Water year 1935-36.....							215,348	2,990	128	588	427,100	



## BEAR RIVER BASIN

15

Logan River above State dam, near Logan, Utah

Location. - Water-stage recorder, lat. 41°44'40", long. 111°47'0", in NE $\frac{1}{4}$  sec. 36, T. 12 N., R. 1 E., at Logan plant of Utah Power & Light Co., 125 feet above confluence of tailrace with river and 2 $\frac{1}{2}$  miles east of Logan.

Drainage area. - 218 square miles.

Records available. - May 1913 to September 1936. June 1896 to December 1912 at old station a quarter of a mile downstream; flow at present station plus that of tailrace comparable to flow at old station.

Average discharge. - 22 years (1913-36), 125 second-feet.

Extremes. - Maximum discharge during year, 1,370 second-feet May 15 (gage height, 5.57 feet); minimum daily discharge, 8 second-feet for several days during the year.

1913-36: Maximum discharge (estimated), 2,000 second-feet Mar. 21, 1916 (gage height, 5.6 feet); minimum daily discharge, 8 second-feet for several days in 1931, 1934-36.

Remarks. - Records fair. Water diverted from river and springs upstream for power, irrigation, and municipal supply. Flow regulated by operation of power plants above station. Water-stage recorder graph and results of several discharge measurements furnished by Utah Power & Light Co.

Rating table, water year 1935-36 (gage height, in feet, and discharge, in second-feet) (shifting-control method used Aug. 11 to Sept. 30)

1.8	4	2.4	55	3.2	225	4.0	510
1.9	9	2.6	87	3.4	283	4.3	645
2.0	15	2.8	125	3.6	352	4.6	790
2.2	31	3.0	171	3.8	430	5.0	1,010

Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	8	8	9	8	10	10	705	994	243	59	18
2	14	10	6	9	9	10	11	715	884	226	52	16
3	14	8	8	11	10	21	10	770	850	215	51	22
4	13	8	6	8	10	14	10	654	760	196	47	20
5	13	8	8	8	11	14	10	1,040	740	184	45	18
6	10	8	8	8	10	14	10	900	710	169	45	18
7	10	8	8	8	10	14	11	668	720	164	42	18
8	10	8	8	8	8	14	11	604	725	152	41	18
9	10	10	8	8	9	14	15	604	700	143	40	17
10	9	9	8	9	9	14	15	750	654	132	39	16
11	10	8	8	8	10	14	29	911	668	132	38	14
12	9	8	8	8	10	13	47	1,040	676	119	43	14
13	9	8	8	8	10	14	105	1,110	658	109	36	17
14	13	8	8	8	9	14	140	1,210	658	101	31	16
15	15	8	10	8	9	14	147	1,240	695	98	31	15
16	14	8	8	8	9	15	215	1,240	618	92	29	15
17	16	8	8	8	10	15	261	1,170	604	84	28	14
18	16	8	8	8	9	13	356	1,070	582	84	32	15
19	13	8	8	8	9	13	418	1,050	555	80	29	13
20	11	8	8	8	9	14	519	1,060	519	85	28	10
21	15	8	18	8	9	16	614	982	502	78	28	12
22	15	8	18	8	10	15	668	916	458	78	26	12
23	11	8	8	10	10	15	755	889	442	78	26	11
24	8	8	8	14	9	14	755	906	402	72	23	11
25	9	8	8	14	9	14	730	960	382	68	21	11
26	8	8	8	11	9	14	755	999	356	62	20	11
27	8	9	8	8	10	14	785	998	327	58	19	10
28	8	8	8	10	10	14	700	950	303	56	18	10
29	11	8	8	10	10	14	658	966	300	58	19	10
30	8	8	15	9	-	13	668	988	271	52	19	10
31	8	-	13	9	-	10	-	994	-	58	21	-

Month		Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....		345	16	8	11.1	684
November.....		245	10	8	8.2	486
December.....		283	18	8	9.1	561
Calendar year 1935.....		21,911	555	8	60	43,460
January.....		277	14	8	8.9	549
February.....		274	11	8	9.4	543
March.....		427	21	10	13.8	847
April.....		9,438	765	10	318	18,720
May.....		29,229	1,240	604	943	57,970
June.....		17,713	994	271	590	35,150
July.....		3,526	243	52	114	6,990
August.....		1,019	52	18	32.9	2,020
September.....		434	22	10	14.8	861
Water year 1935-36 .....		63,210	1,240	8	173	125,400

## BEAR RIVER BASIN

Utah Power & Light Co.'s tailrace near Logan, Utah

Location.— Water-stage recorder, lat.  $41^{\circ}44'40''$ , long.  $111^{\circ}47'0''$ , in NE $\frac{1}{4}$  sec. 36, T. 12 N., R. 1 E., 100 feet below power house of Utah Power & Light Co. and 2 $\frac{1}{2}$  miles east of Logan.

Records available.— May 1913 to September 1936.

Average discharge.— 23 years, 100 second-feet.

Remarks.— Records good. Flow is regulated by operation of power plant above gage. Power canal diverts from right bank of Logan River in SE $\frac{1}{4}$  sec. 29, T. 12 N., R. 2 E. Water is returned to river 125 feet below gaging station on Logan River above State dam. Water-stage recorder graph and results of several discharge measurements furnished by Utah Power & Light Co.

Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	96	90	77	74	77	66	70	85	168	174	172	156
2	96	91	77	71	79	65	72	84	169	172	172	157
3	97	92	76	74	74	75	76	112	121	172	172	151
4	96	92	76	76	72	71	77	163	172	172	174	158
5	97	89	79	77	67	71	74	162	172	172	175	156
6	95	87	83	71	69	75	72	162	174	172	175	151
7	95	89	80	55	66	80	75	162	174	172	175	151
8	95	90	80	57	55	78	84	164	175	172	175	151
9	93	91	80	74	57	85	89	166	174	170	176	150
10	91	93	80	83	74	86	95	166	175	172	175	146
11	89	92	80	83	76	84	86	166	175	172	176	139
12	89	89	79	77	78	85	87	166	174	172	175	139
13	89	87	79	77	79	84	87	166	172	174	180	134
14	95	87	78	77	77	84	87	166	175	174	178	143
15	96	87	71	79	77	80	87	166	162	172	178	146
16	96	90	66	80	69	77	87	164	165	172	173	143
17	96	89	62	76	69	79	87	164	176	172	175	144
18	93	91	64	66	68	79	87	164	174	174	176	144
19	93	90	66	68	67	84	87	164	174	172	178	144
20	93	91	74	72	68	85	87	166	176	172	178	143
21	93	89	62	74	70	91	87	166	148	172	176	140
22	91	90	62	61	74	79	87	164	175	170	176	137
23	93	87	75	60	77	89	87	168	169	172	176	136
24	93	87	74	60	76	86	85	168	174	172	174	133
25	91	87	74	62	70	81	85	166	172	172	160	132
26	91	87	76	56	70	81	87	168	172	172	162	133
27	91	87	77	58	75	81	85	168	176	174	157	136
28	90	87	75	63	72	81	85	168	172	174	158	135
29	87	87	74	72	71	79	85	169	174	174	157	133
30	89	83	66	54	-	75	85	168	172	172	157	132
31	89	-	70	48	-	76	-	169	-	172	157	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	2,878	97	87	92.6	5,710
November.....	2,668	93	83	88.9	5,290
December.....	2,292	80	62	73.9	4,550
Calendar year 1935 .....	42,071	192	38	115	83,450
January.....	2,155	83	48	69.5	4,270
February.....	2,073	79	55	71.5	4,110
March.....	2,471	91	65	79.7	4,900
April.....	2,511	87	70	83.7	4,980
May.....	4,920	169	84	159	9,760
June.....	5,089	175	121	170	10,090
July.....	5,342	174	170	172	10,600
August.....	5,323	180	157	172	10,560
September.....	4,293	158	132	143	5,520
Water year 1935-36 .....	42,015	180	48	115	83,340

## Logan, Hyde Park &amp; Smithfield Canal near Logan, Utah

Location.— Water-stage recorder, lat.  $41^{\circ}44'45''$ , long.  $111^{\circ}47'5''$ , in SE $\frac{1}{4}$  sec. 25, T. 12 N., R. 1 E., at concrete rating flume  $1\frac{1}{4}$  miles below head of canal and  $2\frac{1}{2}$  miles east of Logan.

Records available.— June 1904 to December 1907, January 1909 to September 1936.

Average discharge.— 13 years (1923-36), 30.3 second-feet.

Remarks.— Records good except those estimated for Oct. 5-22, Nov. 12 to Mar. 8, Apr. 1-10, 12-27, which are fair. No diversions above gage. Flow regulated by head gates at diversion works. Canal diverts water from Logan River in NE $\frac{1}{4}$  sec. 31, T. 12 N., R. 2 E., for irrigation and domestic use in territory north of Logan. Results of several discharge measurements furnished by Utah Power & Light Co.

## Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	9				5	3	60	99	126	69	45
2	19	8				5	6	60	87	124	67	45
3	16	7				5	6	61	85	122	66	46
4	15	7				5	6	64	84	120	62	45
5	14	6				5	6	52	83	119	59	45
6	13	6				5	6	48	82	120	58	44
7	12	6				5	6	53	83	124	55	44
8	12	6				2	6	53	83	122	52	44
9	11	7				0	6	58	82	121	49	44
10	11	6				0	6	17	81	120	47	44
11	10	6				0	6	1	81	119	45	45
12	10	6				0	6	2	84	120	45	43
13	10	6				0	6	2	104	118	45	44
14	9	6				0	6	44	105	109	48	42
15	9	6				0	6	93	105	105	46	38
16	9	6				0	6	105	110	104	49	39
17	9	6				0	6	104	117	103	48	38
18	9	6				0	6	109	117	101	46	37
19	9	6				0	6	121	120	96	43	36
20	9	6				0	6	127	127	83	40	36
21	9	6				0	6	124	130	81	38	37
22	9	6				0	6	125	128	75	39	38
23	9	6				0	6	127	127	74	36	37
24	9	6				0	6	127	126	75	40	36
25	9	6				0	6	129	127	73	46	36
26	9	6				0	6	129	129	74	49	36
27	9	6				0	6	129	129	74	49	36
28	9	6				0	6	129	127	74	49	36
29	11	6				0	76	127	127	74	46	36
30	9	6				0	58	129	126	72	45	35
31	9	-				0	-	124	-	72	45	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	337	20	9	10.9	668
November.....	188	9	6	6.3	373
December.....	186	-	-	6	369
Calendar year 1935 .....	9,944	135	0	27.2	19,720
January.....	155	-	-	5	307
February.....	145	-	-	5	288
March.....	37	5	0	1.2	73
April.....	333	76	3	11.1	660
May.....	2,633	129	1	84.9	5,220
June.....	3,195	130	81	106	6,340
July.....	3,091	126	72	99.7	6,130
August.....	1,520	69	36	49.0	3,010
September.....	1,205	46	35	40.2	2,390
Water year 1935-36 .....	13,025	130	0	35.6	25,830



## BEAR RIVER BASIN

19

## West Side Canal near Collinston, Utah

Location.— Water-stage recorder, lat.  $49^{\circ}50'$ , long.  $112^{\circ}4'$ , in SW $\frac{1}{4}$  sec. 27, T. 13 N., R. 2 W., at Wheelon siding on Oregon Short Line Railroad, 4,200 feet below Cutler Dam and 4 miles north of Collinston.

Records available.— June 1912 to September 1936.

Average discharge.— 24 years, 222 second-feet.

Remarks.— Records good. Discharge, Dec. 15 to May 13, except estimated periods, determined from once-daily gage readings. Canal diverts from west side of Bear River in NW $\frac{1}{4}$  SW $\frac{1}{4}$  sec. 26, T. 13 N., R. 2 W., at same diversion dam as Hammond (East Side) Canal and Cutler power plant. Water used for irrigation in eastern Box Elder County. Water-stage recorder graph and several discharge measurements furnished by Utah Power & Light Co.

## Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	336	86	49	13		11	13	0	482	580	482	523
2	269	84	48	13		12	13	0	559	568	480	525
3	115	83	48	13		13	14	*40	523	569	480	527
4	118	80	48	13		13	14	*150	410	571	469	514
5	117	76	49	—		13	13	202	306	571	450	509
6	114	69	49	—		13	13	207	305	571	434	510
7	116	63	49	—		13	13	231	305	573	448	498
8	221	62	49	—		*13	*13	243	303	576	470	485
9	276	55	49	—		13	14	296	306	576	491	485
10	296	48	49	—		13	14	298	303	574	504	483
11	315	47	49	—		13	14	344	344	551	502	483
12	315	48	49	—		13	14	450	400	478	502	469
13	315	48	49	—		13	*14	400	456	450	504	462
14	315	48	49	—		13	*7	544	527	461	493	459
15	223	48	49	—		15	0	602	574	448	493	451
16	109	48	49	—		15	0	602	608	448	488	442
17	103	48	49	—		15	0	612	605	450	485	432
18	99	48	30	—		15	0	625	612	448	485	418
19	99	47	30	—		15	0	622	622	461	485	412
20	98	47	20	—		15	0	634	622	474	485	413
21	105	47	20	—		16	0	637	627	475	504	413
22	129	47	20	—		13	0	639	632	488	504	408
23	135	47	20	—		13	0	641	632	499	502	408
24	135	47	20	—		12	0	641	632	504	502	413
25	135	48	20	—		*12	0	639	627	492	504	413
26	135	48	19	—		12	0	641	636	478	504	407
27	132	48	19	—		12	0	639	636	469	506	392
28	139	48	13	—		12	0	639	627	456	504	382
29	128	48	13	+15		*12	0	641	615	459	512	368
30	128	48	13	—		12	0	646	615	467	523	366
31	104	—	13	—		12	—	608	—	480	523	—
Month								Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....								5,364	336	98	173	10,640
November.....								1,650	86	47	55.3	3,290
December.....								1,100	49	13	35.5	2,180
Calendar year 1935 .....								74,296	658	0	204	147,400
January.....								434	—	—	*14	861
February.....								377	—	—	*13	748
March.....								407	16	11	13.1	807
April.....								183	14	0	6.1	363
May.....								14,113	646	0	455	27,990
June.....								15,451	636	303	515	30,650
July.....								15,665	580	448	505	31,070
August.....								15,218	523	454	491	30,180
September.....								13,470	527	366	449	26,720
Water year 1935-36 .....								63,441	646	0	228	165,500

\*Estimated.

†Discharge measurement.

## Hammond (East Side) Canal near Collinston, Utah

Location. - Water-stage recorder, lat.  $41^{\circ}50'$ , long.  $112^{\circ}3'$ , in SE $\frac{1}{4}$  sec. 27, T. 13 N., R. 2 W., at Wheelon siding on Oregon Short Line Railroad, 3,600 feet below Cutler Dam and 4 miles north of Collinston.

Records available. - June 1912 to September 1936.

Average discharge. - 17 years (1917-21, 1922-23, 1924-36), 51.2 second-feet.

Remarks. - Records good. Discharge determined from daily gage readings May 3-12 and interpolated May 2. Canal diverts from east side of Bear River in NW $\frac{1}{4}$  SW $\frac{1}{4}$  sec. 28, T. 13 N., R. 2 W., at same diversion dam as West Side Canal and Cutler power plant. Water used for irrigation in eastern Box Elder County. Water-stage recorder graph and several discharge measurements furnished by Utah Power & Light Co.

## Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	
1	79	18						0	102	128	114	124	
2	54	18						35	100	124	117	124	
3	56	18						72	96	125	124	124	
4	57	18						76	75	124	126	118	
5	56	18						81	60	126	124	111	
6	56	18						83	46	125	118	102	
7	57	18						79	46	126	115	100	
8	65	18						78	49	126	115	100	
9	68	16						80	49	125	115	103	
10	66	12						81	48	126	115	107	
11	59	12						100	48	126	115	107	
12	58	12						115	52	126	116	108	
13	61	12						126	85	126	116	107	
14	59	12						127	105	127	123	103	
15	58	11						137	115	127	123	95	
16	57	11						145	131	127	124	95	
17	41	11						150	129	126	123	94	
18	35	11						150	128	125	123	85	
19	35	11						146	139	125	123	82	
20	35	11						145	145	124	124	85	
21	35	11						147	145	125	124	86	
22	34	11						146	150	125	124	86	
23	34	11						145	152	126	124	85	
24	34	11						145	152	126	124	85	
25	34	11						145	153	126	124	86	
26	34	11						145	153	126	124	92	
27	33	11						143	153	126	124	.88	
28	24	10						136	144	125	125	.85	
29	15	5						134	129	126	124	.82	
30	16	0						137	132	124	124	.82	
31	18	-						124	-	119	124	-	
Month									Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....								1,423	79	15	45.9	2,820	
November.....								378	18	0	12.6	750	
December.....								0	0	0	0	0	
Calendar year 1935.....								16,689	156	0	45.7	33,100	
January.....								0	0	0	0	0	
February.....								0	0	0	0	0	
March.....								0	0	0	0	0	
April.....								0	0	0	0	0	
May.....								3,553	150	0	115	7,050	
June.....								3,211	153	46	107	6,370	
July.....								3,887	128	119	125	7,710	
August.....								3,757	125	114	121	7,450	
September.....								2,933	124	82	97.8	5,820	
Water year 1935-36.....								19,142	153	0	52.3	37,970	

## BEAR RIVER BASIN

## Devil Creek near Malad, Idaho

Location.— Staff gage, lat.  $42^{\circ}13'$ , long.  $112^{\circ}17'$ , in sec. 8, T. 14 S., R. 36 E., 400 feet below dam site for proposed reservoir, 0.5 mile northeast of St. John, 2½ miles northwest of Malad, and 9 miles by stream above confluence with Malad River.

Records available.— October 1931 to September 1936.

Extremes.— Maximum discharge during year, 60 second-feet Aug. 17 (from high-water mark made during cloudburst), from rating curve extended above 22 second-feet; minimum discharge observed, 0.9 second-foot Dec. 16-18.

1931-36: Maximum discharge, that of Aug. 17, 1936; minimum discharge observed, 0.5 second-foot Sept. 10, 1934 (gage height, 0.11 foot).

Remarks.— Records fair. Gage read once daily except during winter, when readings were made three or four times a week. Flow regulated by Evans Dividers (an irrigation diversion works), 3 miles upstream. Several small diversions above this station. Stream receives a part of Birch Creek water above station. Malad power plant and its small reservoir on Birch Creek may cause slight diurnal fluctuation.

## Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.9	1.5	*1.1	*1.7	*1.5	1.7	*2.9	16	12	3.7	3.2	3.9
2	2.8	1.6	1.0	1.4	1.3	*1.7	2.9	16	10	3.7	3.1	3.9
3	2.9	*1.4	1.0	1.1	*1.3	1.7	*2.9	14	10	3.7	3.1	4.2
4	2.9	1.2	*1.2	2.0	1.3	*1.8	2.9	14	10	3.5	3.1	3.9
5	2.5	1.2	1.4	*1.8	*1.3	2.0	*3.0	18	10	3.5	3.1	3.9
6	2.5	1.7	*1.6	1.5	*1.3	*2.1	3.2	19	10	6.0	3.1	4.8
7	2.5	1.7	1.7	*1.6	*1.3	2.2	*2.7	19	9.5	6.3	3.1	5.8
8	2.8	*1.4	*1.8	1.7	1.3	*2.2	2.2	18	9.7	5.6	3.1	5.1
9	2.8	1.2	1.8	*1.7	*1.3	2.2	*2.5	16	9.7	6.3	3.1	4.8
10	2.8	1.2	*1.8	1.7	1.3	*2.0	2.8	16	9.3	5.3	3.1	3.9
11	3.4	1.1	1.8	*1.6	*1.4	1.9	*5.4	16	8.9	5.6	3.1	3.9
12	3.4	1.2	*1.8	*1.6	1.4	*1.9	8.0	16	8.5	5.6	3.1	6.5
13	3.5	1.2	1.8	1.5	*1.4	1.9	*1.6	15	8.2	5.3	3.1	6.5
14	3.0	1.2	1.7	*1.7	1.4	*1.9	2.5	16	8.5	5.6	3.1	6.1
15	3.4	1.2	*1.5	1.9	*1.4	1.9	3.5	18	9.3	5.6	3.1	5.4
16	3.8	1.2	.9	*1.8	1.5	*2.0	*3.4	18	9.3	5.5	4.0	5.1
17	3.9	1.2	*.9	1.6	*1.4	2.2	3.6	16	8.9	5.5	7.0	5.1
18	2.4	*1.5	.9	1.6	1.4	*2.4	4.8	15	8.9	3.4	5.8	4.2
19	2.2	1.8	1.2	1.8	*1.4	*2.6	4.4	15	9.3	3.4	4.8	3.6
20	2.2	1.8	*1.3	*1.6	1.4	*2.6	4.2	14	8.9	3.4	4.5	3.9
21	2.0	1.3	1.4	1.5	*1.4	2.6	4.2	14	7.0	3.4	4.2	3.9
22	1.7	1.6	*1.4	1.4	1.5	*2.6	4.0	14	7.0	3.5	4.8	3.9
23	1.9	1.8	*1.7	1.3	*1.6	2.5	26	13	7.8	3.5	4.5	3.9
24	1.9	*1.4	1.8	*1.3	1.7	2.9	23	13	7.4	3.1	4.5	4.2
25	1.8	1.0	*1.3	*1.3	*1.6	3.5	21	13	6.7	3.4	4.2	3.9
26	1.2	1.0	1.8	*1.3	1.6	*3.4	18	12	6.7	3.4	3.9	3.9
27	*1.4	1.0	*1.8	1.3	*1.6	3.3	17	12	7.0	3.4	4.2	4.0
28	1.5	*1.1	1.9	*1.4	1.6	*3.1	16	10	7.0	3.2	3.9	4.0
29	1.6	1.2	1.9	1.4	*1.6	2.9	16	10	7.0	3.4	3.9	3.7
30	1.6	1.2	2.0	*1.6	-	*2.9	16	11	4.0	3.2	4.5	4.0
31	1.5	-	2.0	1.7	-	2.9	-	12	-	3.2	4.8	-

Month		Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....		76.7	3.9	1.2	2.47	152
November.....		40.3	1.8	1.0	1.34	80
December.....		47.7	2.0	.9	1.54	95
Calendar year 1935 .....		1,039.9	16	.6	2.85	2,060
January.....		48.4	2.0	1.1	1.56	96
February.....		41.5	1.7	1.3	1.43	82
March.....		73.5	3.5	1.7	2.37	146
April.....		554.4	48	2.2	18.5	1,100
May.....		459	19	10	14.8	910
June.....		256.5	12	4.0	8.55	509
July.....		129.2	6.3	3.1	4.17	256
August.....		120.1	7.0	3.1	3.87	238
September.....		133.9	6.5	3.6	4.46	266
Water year 1935-36 .....		1,981.2	48	.9	5.41	3,930

\*Interpolated.

## BEAR RIVER BASIN

Deep Creek below First Creek, near Malad, Idaho

Location.—Staff gage, lat.  $42^{\circ}14'$ , long.  $112^{\circ}11'$ , in sec. 7, T. 14 S., R. 37 E., immediately below proposed reservoir site 1 mile north and  $3\frac{1}{2}$  miles east of Malad and 12 miles by stream above confluence of Deep Creek and Malad River.

Records available.—October 1931 to September 1936.

Extremes.—Maximum discharge observed during year, 113 second-feet Apr. 18 (gage height, 2.50 feet); minimum discharge, 1.3 second-feet (computed) Dec. 16-18, during period of ice effect; minimum gage height, 0.17 foot Feb. 7.

1931-36: Maximum discharge observed, that of Apr. 18, 1936; minimum observed, 0.3 second-foot Aug. 29, 1934.

Remarks.—Records fair. Discharge for periods of ice effect, Dec. 16-31, Jan. 27 to Feb. 6, computed on basis of one discharge measurement, weather records, and records for Devil Creek near Malad. Gage read once daily. Small diversions above station. Reservoir under construction at site above mouth of Third Creek,  $2\frac{1}{2}$  miles upstream from station; used to limited extent during year, beginning May 1.

## Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.6	1.8	1.8	1.6	1.6	4.2	5.0	77	26	14	8.3	5.5
2	1.5	1.8	1.6	1.9	1.4	4.0	5.2	69	25	14	8.1	6.0
3	1.8	1.8	1.8	2.0	1.4	4.2	5.4	82	22	14	7.6	5.3
4	1.9	1.9	1.9	1.8	1.4	4.5	5.5	86	22	14	7.8	5.0
5	1.6	1.8	1.8	1.8	1.4	4.7	5.2	77	24	15	7.3	5.5
6	1.4	1.5	1.9	1.9	1.4	4.8	5.4	69	22	14	6.9	5.7
7	1.5	1.6	1.8	1.6	1.4	5.0	5.5	54	21	14	6.4	5.5
8	1.6	1.8	1.8	1.9	1.6	4.2	6.1	43	21	14	6.0	6.0
9	1.5	1.9	1.6	1.8	1.6	4.5	7.4	37	22	14	6.9	5.3
10	1.5	1.9	1.9	2.0	1.8	4.5	9.1	34	21	14	7.6	4.8
11	1.8	2.0	1.8	2.1	1.9	3.9	12	34	21	14	6.6	5.0
12	1.9	1.8	1.9	2.1	2.1	4.0	26	36	21	14	6.4	3.5
13	1.8	2.0	1.8	2.0	2.2	3.7	34	40	21	14	9.0	4.2
14	1.9	1.8	1.9	2.1	2.4	3.9	69	39	20	14	8.1	4.0
15	2.1	1.9	1.5	2.4	2.5	3.7	77	48	21	13	7.3	3.8
16	2.1	1.8	1.3	2.2	2.6	3.9	82	51	21	14	7.3	4.2
17	2.0	1.9	1.3	2.1	2.7	4.0	95	48	19	14	6.9	3.8
18	1.8	2.1	1.3	2.0	2.9	4.2	113	46	18	13	7.1	4.0
19	1.8	2.0	1.5	2.1	3.0	4.3	108	43	17	12	6.6	3.8
20	1.8	1.9	1.5	2.0	3.3	4.5	104	41	16	12	6.9	3.5
21	1.6	2.0	1.5	2.2	3.7	4.3	107	59	13	12	6.4	3.3
22	1.9	1.9	1.5	2.1	4.0	4.3	104	57	14	11	6.2	3.1
23	1.8	2.0	1.5	1.9	3.9	4.7	106	51	14	10	6.0	2.9
24	1.9	1.6	1.5	1.8	3.3	5.5	101	29	15	9.5	5.7	3.5
25	2.0	1.8	1.5	1.6	2.7	4.5	104	30	14	8.5	5.5	2.9
26	1.9	1.9	1.6	1.6	3.5	4.7	102	28	14	8.5	5.3	3.3
27	2.0	1.8	1.6	1.5	3.4	4.8	95	27	15	8.5	5.7	2.7
28	1.8	1.9	1.6	1.6	3.6	5.2	92	27	15	8.5	5.3	3.1
29	1.9	1.8	1.6	1.6	3.9	5.2	90	26	16	8.5	5.3	3.5
30	1.8	2.0	1.6	1.7	-	4.7	86	26	15	8.5	5.5	2.9
31	1.9	-	1.6	1.8	-	4.8	-	26	-	8.5	5.3	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
					October November December
January.....	55.4	2.1	1.4	1.79	110
February.....	55.7	2.1	1.5	1.86	110
March.....	50.8	1.9	1.3	1.64	101
April.....	2,310.4	23	1.0	6.33	4,580
May.....	58.9	2.4	1.6	1.90	117
June.....	72.4	4.0	1.4	2.50	144
July.....	137.4	5.5	3.7	4.43	273
August.....	1,766.8	113	5.0	58.9	3,500
September.....	1,380	86	26	44.5	2,740
October.....	566	26	13	18.9	1,120
November.....	377.9	15	8.5	12.2	750
December.....	207.3	9.0	5.3	6.69	411
January.....	125.4	6.0	2.7	4.18	249
Water year 1935-36 .....	4,854.0	113	1.3	13.3	9,620

## Weber River near Oakley, Utah

Location.— Water-stage recorder, lat.  $40^{\circ}44'10''$ , long.  $111^{\circ}14'45''$ , in NE $\frac{1}{4}$  sec. 15, T. 1 S., R. 6 E., near mouth of canyon, 2 miles below South Fork of Weber River, 3 miles northeast of Oakley, and 6 miles above Beaver (or Kamas) Creek.

Drainage area.— 163 square miles.

Records available.— October 1904 to September 1936.

Average discharge.— 30 years (1906-36), 244 second-feet.

Extremes.— Maximum discharge during year, 2,370 second-feet May 30 (gage height, 4.14 feet); minimum observed, 26 second-feet Nov. 21 (discharge measurement). 1904-36: Maximum discharge observed, 4,000 second-feet July 6, 1907, and June 5-7, 1909; minimum observed, 26 second-feet Aug. 27, 1934, and Nov. 21, 1935.

Remarks.— Records fair. Discharge for periods of ice effect, Nov. 5, 11-13, 15-16, 20-23, Nov. 29 to Apr. 14, and for period May 9-10 computed on basis of weather records and records of station near Coalville. No large diversions above gage. Flow regulated slightly by storage in several small lakes at headwaters utilized as reservoirs and small reservoir on Smith and Morehouse Creeks. Total capacity of all reservoirs, about 3,200 acre-feet.

Rating table, water year 1935-36 except periods of ice effect (gage height, in feet, and discharge, in second-feet)

1.0	36	1.8	187	3.0	830
1.2	60	2.0	252	3.5	1,380
1.4	92	2.3	375	4.0	2,140
1.6	134	2.6	540	4.6	3,000

## Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	52	54	-					55	528	1,450	245	212
2	54	59	-					55	540	1,020	232	215
3	52	57	-					55	619	766	209	190
4	52	56	-					55	766	766	193	173
5	52	56	-					55	950	758	187	173
6	51	57	-					60	960	705	181	176
7	48	55	-					60	792	766	176	170
8	47	54	-					60	661	930	173	152
9	47	54	-					70	650	930	173	149
10	47	51	≈50					80	900	839	184	146
11	47	50	-					100	1,320	911	206	136
12	47	50	-					120	1,490	990	385	134
13	47	50	-					150	1,520	1,010	366	156
14	48	51	-					180	1,580	911	267	162
15	52	50	-					212	1,640	839	232	159
16	54	60	-					235	1,490	728	213	154
17	55	50	-					282	1,480	675	199	162
18	54	51	-					322	1,410	612	187	149
19	51	51	-					344	1,340	605	181	142
20	51	50	-					385	1,550	566	173	136
21	51	50	-					447	1,290	504	193	146
22	51	50	-					510	1,100	469	196	149
23	50	50	-					546	1,150	410	179	142
24	51	51	-					553	1,280	400	165	136
25	51	48	-					546	1,410	375	167	134
26	50	47	-					546	1,520	322	156	132
27	50	48	-					572	1,620	310	156	127
28	50	51	-					566	1,490	305	173	125
29	51	50	-					572	1,640	305	209	123
30	50	50	-					540	1,700	267	212	121
31	54	-	-					-	1,730	-	209	119

Month		Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....		1,567	55	47	50.5	3,110
November.....		1,551	59	47	51.7	3,080
December.....		1,550	-	-	50	3,070
Calendar year 1935 .....		72,907	2,680	-	200	144,600
January.....		1,550	-	-	50	3,070
February.....		1,450	-	-	50	2,880
March.....		1,705	-	-	55	3,380
April.....		8,333	572	55	278	16,530
May.....		38,116	1,730	528	1,230	75,600
June.....		20,444	1,450	267	681	40,550
July.....		6,382	385	156	206	12,660
August.....		4,700	215	119	152	9,320
September.....		2,982	167	74	98.7	5,880
Water year 1935-36.....		90,310	1,730	47	247	179,100

\*Discharge measurement.



## Echo Reservoir at Echo, Utah

Location. - Staff gage, lat.  $40^{\circ}57'50''$ , long.  $111^{\circ}26'0''$ , in NW $\frac{1}{4}$  SW $\frac{1}{4}$  sec. 30, T. 3 N., R. 5 E., near outlet works at left end of Echo Dam, 1 mile southeast of Echo.

Records available. - October 1930 to September 1936.

Remarks. - Echo Dam, constructed by the U. S. Bureau of Reclamation and completed in 1931, has an impounding capacity of 74,000 acre-feet. Gage-height record furnished by Weber River Water Commissioner.

Capacity table (gage height, in feet, and contents, in acre-feet)

Gage height	Content	Gage height	Content
5,450	0	5,510	18,570
5,455	60	5,515	22,390
5,460	170	5,520	26,660
5,465	440	5,525	31,210
5,470	980	5,530	36,080
5,475	1,930	5,535	41,380
5,480	3,180	5,540	47,040
5,485	4,830	5,545	53,060
5,490	6,890	5,550	59,530
5,495	9,250	5,555	66,320
5,500	11,960	5,560	73,430
5,505	15,100		

Contents, in acre-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6,050	860	860	964	970	6,180	15,400	41,000	73,730	69,390	59,130	45,540
2	5,700	886	860	957	1,150	6,370	15,700	41,000	73,730	69,180	59,360	44,910
3	5,400	918	886	957	1,310	6,560	16,040	41,050	73,430	68,550	59,660	44,460
4	5,060	918	925	951	1,440	6,780	16,380	41,540	73,430	67,920	59,320	43,950
5	4,780	905	938	938	1,540	6,980	16,730	42,440	73,730	67,360	59,400	43,500
6	4,500	912	964	938	1,690	7,160	17,040	43,780	73,660	66,880	59,200	43,050
7	4,250	938	970	886	1,820	7,360	17,350	44,970	73,580	66,390	58,870	42,600
8	3,980	958	970	886	1,910	7,570	17,680	45,260	73,580	65,910	58,470	42,220
9	3,720	964	951	925	1,980	7,800	18,110	44,970	73,660	65,420	57,950	41,760
10	3,470	990	931	925	2,080	8,040	18,140	44,680	73,730	64,940	57,560	41,440
11	3,210	990	931	957	2,210	8,270	18,030	44,850	73,660	64,800	57,560	41,160
12	2,950	977	919	990	2,350	8,510	18,250	45,540	73,660	64,940	56,900	40,940
13	2,720	977	839	1,010	2,580	8,700	17,990	46,690	73,580	65,490	56,440	40,660
14	2,490	977	938	995	2,800	8,900	18,070	45,390	73,730	65,770	56,120	40,280
15	2,280	977	951	1,010	2,960	9,120	18,570	50,120	73,730	65,770	55,660	39,960
16	2,090	964	892	1,000	3,150	9,350	19,300	52,190	73,730	65,630	55,220	39,630
17	1,930	970	860	977	3,340	9,580	21,080	53,820	75,750	65,350	54,700	39,510
18	1,780	990	899	964	3,530	9,900	23,590	55,220	75,730	65,080	54,190	39,040
19	1,650	983	925	945	3,720	10,320	26,310	56,250	73,730	64,800	53,700	38,780
20	1,530	964	951	990	3,880	10,760	28,900	57,030	73,730	64,460	53,190	38,560
21	1,420	925	938	1,050	4,080	11,220	30,700	59,200	73,280	64,190	52,690	38,300
22	1,310	905	938	990	4,260	11,750	32,010	61,600	72,780	63,710	52,070	37,880
23	1,210	905	938	925	4,550	12,260	33,450	63,450	72,260	63,160	51,450	37,460
24	1,120	918	945	899	4,890	12,670	34,930	65,220	71,850	62,680	50,840	36,950
25	1,040	944	951	912	5,120	13,040	36,180	67,150	71,320	62,140	50,180	36,490
26	990	938	951	945	5,360	13,350	37,360	68,970	70,920	61,600	49,520	36,030
27	964	899	938	951	5,580	13,700	38,300	70,460	70,320	61,130	48,860	35,580
28	925	899	931	957	5,780	13,980	39,310	71,110	69,820	60,590	48,210	35,080
29	892	899	931	964	5,970	14,310	40,120	71,540	69,390	60,130	47,510	34,650
30	860	860	925	925	-	14,600	40,660	72,190	69,250	59,900	46,810	34,240
31	860	-	938	886	-	14,940	-	73,060	-	59,460	46,110	-















## JORDAN RIVER BASIN

33

Jordan River at Narrows, near Lehi, Utah

Location.— Water-stage recorders, lat.  $40^{\circ}26'40''$ , long.  $111^{\circ}55'20''$ , in SE $\frac{1}{4}$ NW $\frac{1}{4}$  sec. 28, T. 4 S., R. 1 W., at Narrows,  $5\frac{1}{2}$  miles northwest of Lehi.

Drainage area.— 2,610 square miles.

Records available.— October 1934 to September 1936; May to December 1904, July 1913 to September 1934 at outlet of Utah Lake,  $7\frac{1}{2}$  miles upstream.

Average discharge.— 23 years (1913-36), 392 second-feet.

Extremes.— Maximum daily discharge during year, 615 second-feet June 22 and 23; minimum, 3 second-feet Oct. 16-21. 1913-36: Maximum daily discharge, 1,370 second-feet June 8, 1923 (gage height, 7.78 feet, at former gage).

Remarks.— Records good. Records give the combined flow of Jordan River, Utah & Salt Lake Canal, and East Jordan Canal.

Daily combined discharge, in second-feet, October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	33	15	4	4	5	4	5	399	491	584	451	409
2	11	15	4	4	5	4	5	424	210	588	493	413
3	4	15	4	4	5	4	5	503	10	590	526	422
4	4	15	4	4	5	4	5	533	8	595	530	413
5	4	15	4	4	5	4	5	515	8	594	536	392
6	4	15	4	5	5	4	5	392	9	541	534	328
7	4	15	4	5	5	4	5	209	9	501	533	314
8	4	15	4	5	5	4	5	309	9	585	517	313
9	4	15	4	5	5	4	5	321	8	597	474	300
10	12	15	4	5	5	4	5	436	9	558	485	308
11	31	15	4	5	5	4	5	516	165	428	472	311
12	30	15	4	5	5	4	5	514	397	353	500	319
13	16	15	4	5	5	4	5	528	459	339	360	351
14	4	15	4	5	5	4	5	526	533	336	318	343
15	4	15	4	5	5	4	5	549	550	325	397	304
16	3	15	4	5	5	5	5	538	561	432	469	278
17	3	15	4	5	5	5	5	545	570	467	408	279
18	3	15	4	5	5	5	5	556	553	483	438	279
19	3	14	4	5	5	5	5	556	569	522	422	273
20	3	14	4	5	5	5	5	62	499	609	522	447
21	3	14	4	5	5	5	140	495	607	506	448	377
22	12	14	4	5	5	5	174	544	615	496	444	384
23	17	13	4	5	5	5	195	554	615	519	440	396
24	16	12	4	5	5	5	203	585	610	500	451	401
25	15	12	4	5	5	5	226	550	607	465	373	391
26	15	11	4	5	5	5	243	547	602	478	386	335
27	15	7	4	5	5	5	297	556	607	524	293	365
28	15	4	4	5	5	5	326	549	592	527	338	404
29	15	4	4	5	5	5	351	515	577	512	384	403
30	15	4	4	5	-	5	372	539	576	488	406	399
31	15	-	4	5	-	5	-	531	-	480	408	-
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....							537	33	3	109	668	
November.....							593	15	4	13.1	780	
December.....							124	4	4	4.0	246	
Calendar year 1935 .....							36,615	486	3	100	72,630	
January.....							150	5	4	4.8	298	
February.....							145	5	5	5.0	288	
March.....							140	5	4	4.5	278	
April.....							2,704	372	5	90.1	5,360	
May.....							15,503	556	209	494	30,350	
June.....							11,745	615	8	392	23,300	
July.....							15,435	597	325	498	30,610	
August.....							13,661	556	293	441	27,100	
September.....							10,539	422	273	351	20,900	
Water year 1935-36 .....							70,676	615	3	193	140,200	

## JORDAN RIVER BASIN

## Salt Creek near Nephi, Utah

Location.- Staff gage and Parshall rating flume, lat.  $39^{\circ}43'$ , long.  $111^{\circ}47'$ , in NW $\frac{1}{4}$  sec. T. 13 S., R. 1 E., 50 feet below tailrace of Nephi municipal power plant, 100 feet above intake of Nephi Plaster Co.'s canal, 2 $\frac{1}{2}$  miles below mouth of South Fork, and 3 $\frac{1}{2}$  miles east of Nephi.

Drainage area.- 95 square miles.

Records available.- April 1925 to September 1936.

Average discharge.- 11 years, 24.2 second-feet.

Extremes.- Maximum discharge observed during year, about 300 second-feet July 22; minimum observed, 5 second-feet Feb. 8.

1925-36: Maximum discharge observed, about 800 second-feet July 17, 1932; minimum daily discharge, 3 second-feet Dec. 2, 4, 1935.

Remarks.- Records fair. Gage read twice daily except during summer floods, when several readings were taken. Discharge Apr. 15-19 based on one discharge measurement and weather records. Discharge Apr. 20 to June 3 determined from gage at debris dam three-quarters of a mile upstream, while water was being by-passed around rating flume. Discharge based on formula for 7-foot Parshall flume. There are a few small diversions above station.

## Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12	12	10	10	11	11	18	136	100	46	*50	23
2	12	11	10	10	11	12	17	142	85	45	45	23
3	12	12	10	10	10	12	17	162	73	44	40	19
4	13	12	10	10	9	12	17	174	60	42	38	20
5	12	11	10	10	9	12	17	186	59	41	*45	17
6	12	11	10	10	10	13	17	150	62	42	39	17
7	12	11	9	9	10	13	18	120	69	43	35	16
8	12	11	10	10	7	14	21	111	73	40	32	16
9	12	11	10	10	9	16	24	110	70	41	30	16
10	12	11	10	11	9	15	28	144	69	46	*40	*40
11	12	10	10	11	10	14	45	157	69	67	33	17
12	12	10	10	10	13	16	61	166	74	40	*40	16
13	12	10	10	10	11	16	72	168	76	36	32	16
14	12	10	10	10	10	18	118	170	74	35	32	14
15	12	10	9	11	11	18	130	170	70	34	31	14
16	12	10	9	11	11	18	140	149	69	*45	24	14
17	12	10	9	10	12	22	150	126	67	38	24	14
18	12	11	9	9	11	23	160	120	66	38	24	14
19	12	11	9	9	10	20	170	118	66	41	23	14
20	12	10	9	9	10	22	193	114	65	41	26	14
21	12	10	9	9	10	23	224	89	63	38	21	13
22	12	10	9	9	10	22	241	71	62	*60	20	13
23	12	10	9	9	12	20	221	66	60	50	20	13
24	12	10	10	10	11	20	214	74	58	43	19	13
25	12	10	10	9	10	19	173	81	56	62	18	13
26	12	10	10	10	10	18	166	93	55	54	18	14
27	12	10	10	10	11	18	173	86	55	47	17	14
28	12	10	10	10	11	18	168	87	56	38	16	14
29	12	10	10	10	11	18	165	97	55	43	16	13
30	12	10	10	9	-	18	157	107	52	44	16	13
31	12	-	10	10	-	20	-	122	-	*70	20	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in
					acres-feet
October.....	373	13	12	12.0	740
November.....	515	12	10	10.5	625
December.....	300	10	9	9.7	595
Calendar year 1936.....	8,738	125	4	23.9	17,330
January.....	305	11	9	9.8	605
February.....	300	13	7	10.3	595
March.....	531	23	11	17.1	1,050
April.....	3,355	241	17	111	6,610
May.....	3,866	186	66	125	7,670
June.....	1,986	100	52	66.2	3,940
July.....	1,584	70	34	45.0	2,760
August.....	884	50	16	25.5	1,750
September.....	487	40	13	16.2	966
Water year 1935-36.....	14,076	241	7	38.5	27,920

\*Determined from graph based on several gage readings.



## Weber-Provo diversion canal near Woodland, Utah

Location.— Water-stage recorder and Parshall rating flume, lat.  $40^{\circ}36'40''$ , long.  $111^{\circ}18'15''$ , in SW $\frac{1}{4}$  sec. 30, T. 2 S., R. 6 E., 100 feet above confluence with Provo River and  $4\frac{1}{2}$  miles northwest of Woodland. Prior to July 1, 1936, staff gage at same datum and location.

Records available.— October 1931 to September 1936.

Remarks.— Canal diverts from Weber River in SW $\frac{1}{4}$  sec. 21, T. 1 S., R. 6 E., for irrigation in Jordan River Basin. Records show quantity of water reaching Provo River for periods when water was being diverted from Weber River. Records of daily discharge furnished by Provo River water commissioner.

## Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							(*)	134	143	60		
2							(*)	134	140	54		
3							(*)	137	134	35		
4							(*)	142	142	12		
5							(*)	145	137	9		
6							(*)	137	136	9		
7							(*)	137	138	6		
8							(*)	134	140	17		
9							(*)	136	141	29		
10							(*)	138	140	32		
11							(*)	137	145	47		
12							(*)	98	144	97		
13							(*)	(*)	144	121		
14							44	(*)	140	97		
15							58	(*)	138	63		
16							20	(*)	140	31		
17							25	(*)	140	(*)		
18							37	(*)	137	(*)		
19							71	(*)	139	(*)		
20							87	(*)	141	(*)		
21							106	(*)	139	(*)		
22							112	(*)	137	(*)		
23							118	(*)	137	(*)		
24							122	(*)	130	(*)		
25							123	(*)	137	(*)		
26							125	68	118	(*)		
27							125	140	99	(*)		
28							129	137	97	(*)		
29							134	137	95	(*)		
30							136	140	57	(*)		
31							-	140	-	(*)		

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	(*)	(*)	(*)	(*)	(*)
November.....	(*)	(*)	(*)	(*)	(*)
December.....	(*)	(*)	(*)	(*)	(*)
Calendar year 1935.....	5,685	149	(*)	15.6	11,270
January.....	(*)	(*)	(*)	(*)	(*)
February.....	(*)	(*)	(*)	(*)	(*)
March.....	(*)	(*)	(*)	(*)	(*)
April.....	1,570	136	(*)	52.3	3,110
May.....	2,369	143	(*)	70.4	4,700
June.....	3,943	144	57	151	7,820
July.....	73.7	121	(*)	23.1	1,420
August.....	(*)	(*)	(*)	(*)	(*)
September.....	(*)	(*)	(*)	(*)	(*)
Water year 1935-36.....	8,599	144	(*)	23.5	17,060

\*No water being diverted from the Weber River.

## South Fork of Provo River at Forks, Utah

Location. - Water-stage recorder and Parshall flume, lat.  $40^{\circ}21'$ , long.  $111^{\circ}34'$ , in SE $\frac{1}{4}$  sec. 26, T. 5 S., R. 3 E., a quarter of a mile southeast of Forks and Vivian Park and 0.5 mile above confluence with Provo River.

Drainage area. - 30 square miles.

Records available. - November 1911 to September 1936.

Average discharge. - 24 years (1912-36), 30.6 second-feet.

Extremes. - Maximum discharge during year, 56 second-feet May 16 (gage height, 1.39 feet); minimum daily discharge, 19 second-feet Oct. 5-10 and Nov. 8.

1911-36: Maximum discharge observed, 123 second-feet May 27, 1922; minimum, 13 second-feet several times in 1934 and 1935.

Remarks. - Records fair. Discharge Oct. 8-17, Nov. 11-13, Feb. 3 to Mar. 8, Mar. 10-24, Sept. 5-12 and 14-19 interpolated. Station below all diversions. Flow regulated by diversions above. Results of several discharge measurements furnished by Utah Power & Light Co.

Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	22	25	22	22	20	23	22	31	41	24	24	24
2	22	24	22	22	21	23	21	31	35	23	24	24
3	21	24	22	22	21	23	21	32	30	22	24	24
4	20	24	22	22	21	23	21	33	28	22	25	25
5	19	24	22	22	21	23	21	34	26	22	24	25
6	19	23	22	22	21	23	21	37	25	21	24	25
7	19	21	22	22	21	23	21	36	25	21	23	25
8	19	19	22	22	21	23	21	35	26	21	22	25
9	19	21	22	22	21	23	22	34	25	21	23	26
10	19	22	22	22	21	23	23	34	24	22	24	26
11	20	22	22	22	21	23	24	34	24	24	24	26
12	20	22	23	22	21	23	24	36	25	23	25	26
13	20	23	23	22	21	23	24	39	25	24	26	26
14	21	23	23	22	21	23	24	45	24	24	26	26
15	21	23	23	22	21	23	24	54	24	24	26	26
16	22	23	23	22	22	23	24	53	24	24	26	26
17	22	23	23	21	22	23	25	50	24	24	25	26
18	22	23	23	21	22	23	25	48	24	24	24	26
19	22	22	22	21	22	23	25	47	24	24	23	26
20	22	22	22	21	22	23	25	48	23	24	26	26
21	22	22	22	21	22	23	25	46	22	25	27	26
22	22	22	22	21	22	23	26	42	21	27	28	26
23	23	22	22	21	22	23	27	39	22	28	28	26
24	23	22	22	21	22	23	28	37	22	28	26	26
25	23	22	21	21	22	24	28	36	22	26	26	26
26	22	22	21	21	22	23	28	38	22	26	26	26
27	23	22	21	21	22	23	30	39	22	26	26	25
28	23	22	21	21	23	23	30	39	22	26	26	24
29	22	22	21	21	23	22	30	38	22	26	25	24
30	24	22	21	20	-	22	32	37	24	25	25	24
31	25	-	22	20	-	22	-	40	-	25	25	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						663	25	19	21.4	1,320		
November.....						673	25	19	22.4	1,340		
December.....						685	25	21	22.1	1,360		
Calendar year 1935 .....						6,759	30	13	18.5	13,420		
January.....						665	22	20	21.5	1,320		
February.....						624	23	20	21.5	1,240		
March.....						711	24	22	22.9	1,410		
April.....						742	32	21	24.7	1,470		
May.....						1,221	54	31	39.4	2,420		
June.....						747	41	21	24.9	1,450		
July.....						746	28	21	24.1	1,460		
August.....						776	29	22	25.0	1,540		
September.....						762	26	24	25.4	1,510		
Water year 1935-36 .....						9,015	54	19	24.6	17,890		

## Sevier River near Kingston, Utah

Location.— Water-stage recorder, lat.  $38^{\circ}12'$ , long.  $112^{\circ}12'$ , in NW $\frac{1}{4}$  sec. 16, T. 30 S., R. 8 W., 1 mile west of Kingston and 2 miles above mouth of East Fork.

Drainage area.— 1,110 square miles.

Records available.— June 1914 to September 1936.

Average discharge.— 22 years, 149 second-feet.

Extremes.— Maximum discharge during year, 1,080 second-feet Sept. 1 (gage height, 3.15 feet), from rating curve extended above 500 second-feet; minimum daily discharge, 7 second-feet July 19.

1914-36: Maximum discharge, 1,460 second-feet May 21, 1922 (gage height, 4.92 feet), from rating curve extended above 500 second-feet; minimum daily discharge, 5 second-feet June 16-20, 1931.

Remarks.— Records fair. Discharge Dec. 18 to Apr. 15 computed on basis of weekly gage readings and weather records; June 15-18, Aug. 4-6 interpolated; July 20-24, Sept. 1-8 estimated on basis of precipitation records. Numerous diversions above station; none between gage and mouth of East Fork.

Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	18	58	105	92	112	135	110	64	17	9	115	150
2	17	64	102	94	114	155	110	57	20	9	123	400
3	18	75	105	96	112	162	107	47	24	9	123	100
4	19	72	107	98	100	155	106	51	30	9	124	90
5	16	79	110	100	88	149	105	57	62	9	126	80
6	13	90	112	98	94	137	103	90	46	10	128	70
7	16	105	107	96	100	113	100	137	33	10	129	60
8	21	100	107	98	106	129	98	140	29	10	97	50
9	26	95	110	98	112	145	97	110	28	25	68	41
10	26	95	107	100	118	148	95	90	24	21	83	29
11	28	102	107	100	118	152	88	81	18	38	64	88
12	26	105	110	100	118	155	81	83	16	21	41	86
13	25	105	105	100	117	158	84	100	14	13	29	83
14	24	102	100	110	116	162	88	102	13	11	21	75
15	23	100	107	121	116	165	91	115	12	11	17	66
16	17	100	112	121	115	161	95	115	11	13	38	58
17	25	107	105	115	115	157	95	149	10	9	158	58
18	21	112	103	112	116	151	102	135	9	8	105	55
19	23	110	100	115	117	145	110	100	9	7	105	53
20	26	105	100	115	118	139	118	81	9	100	86	51
21	26	102	110	116	120	132	132	77	9	75	97	53
22	26	107	115	116	123	126	126	68	50	46	47	47
23	29	115	121	116	120	123	107	62	9	200	21	43
24	32	123	126	116	122	120	92	55	9	100	24	41
25	36	123	128	117	124	118	90	51	8	92	24	41
26	44	118	130	117	126	116	90	44	8	51	24	43
27	55	107	125	117	128	115	81	47	8	123	24	44
28	57	102	115	114	130	115	77	43	8	118	21	44
29	55	105	105	110	133	115	77	32	9	146	26	39
30	49	97	100	110	-	113	72	26	9	162	41	35
31	51	-	90	111	-	113	-	17	-	132	47	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
					in acre-feet
October.....	888	57	13	28.6	1,760
November.....	2,980	123	58	99.3	5,910
December.....	3,386	130	90	109	6,720
Calendar year 1935.....	30,863	302	7	84.6	61,220
January.....	5,339	121	92	108	6,620
February.....	3,348	133	88	115	6,640
March.....	4,279	165	113	138	8,490
April.....	2,927	132	72	97.6	5,810
May.....	2,426	149	17	78.3	4,820
June.....	520	62	8	17.3	1,030
July.....	1,601	200	7	51.6	3,180
August.....	2,175	158	17	70.2	4,310
September.....	2,175	400	29	72.4	4,310
Water year 1935-36 .....	30,042	400	7	82.1	59,590

## Piute Reservoir near Marysville, Utah

Location.— Staff gage, lat.  $38^{\circ}20'$ , long.  $112^{\circ}12'$ , in NW $\frac{1}{4}$  sec. 3, T. 29 S., R. 3 W., at Piute Dam, 9 miles south of Marysville.

Records available.— March 1914 to September 1936.

Remarks.— Capacity of reservoir, 90,000 acre-feet. Gage-height record furnished by Piute Reservoir & Irrigation Co.

Contents, in acre-feet, of October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4,780	3,480	6,640	15,280	23,400	32,240	32,290	32,880	19,440	27,150	25,500	17,200
2	4,640	3,500	6,800	15,520	23,700	32,560	39,460	32,240	19,980	26,700	25,950	17,200
3	4,380	3,560	6,960	15,760	24,000	32,880	39,630	31,600	20,540	26,250	26,250	17,440
4	3,960	3,720	7,200	16,000	24,150	33,040	39,800	30,800	20,980	25,800	26,550	17,560
5	3,600	3,780	7,440	16,240	24,380	33,360	39,970	30,000	21,520	25,200	26,700	17,440
6	3,180	3,780	7,690	16,480	24,600	33,680	40,140	29,250	22,080	24,300	26,850	17,200
7	2,700	3,780	7,960	16,720	24,900	34,000	40,480	28,500	22,800	23,400	27,150	16,960
8	2,300	3,720	8,230	16,960	25,200	34,320	40,820	27,900	23,400	22,560	27,300	16,720
9	2,000	3,660	8,500	17,200	25,500	34,640	40,820	27,300	24,000	21,520	27,300	16,600
10	1,560	3,540	8,800	17,560	25,800	34,800	40,650	26,700	24,600	20,980	27,300	16,480
11	1,100	3,420	9,100	17,920	26,250	34,960	40,480	26,100	25,200	20,680	27,300	16,600
12	890	3,480	9,400	18,160	26,550	35,120	40,650	25,500	25,800	20,680	27,150	16,720
13	800	3,540	9,800	18,400	26,850	35,600	40,820	24,900	26,400	20,680	27,000	16,840
14	890	3,600	10,200	18,530	27,220	35,920	40,480	24,150	26,700	20,960	26,850	16,720
15	950	3,660	10,400	18,660	27,600	36,240	40,140	23,550	27,000	21,100	26,700	16,720
16	1,040	3,720	10,600	18,920	27,900	36,400	39,800	22,800	27,000	21,240	26,550	16,600
17	1,160	3,780	10,800	19,180	28,200	36,570	39,460	22,080	26,850	21,240	26,700	16,480
18	1,250	3,840	11,000	19,440	28,500	36,740	39,120	21,380	26,700	21,100	26,550	16,360
19	1,340	3,960	11,200	19,700	28,800	36,910	38,780	20,820	26,550	21,100	26,250	16,120
20	1,440	4,020	11,400	19,980	29,100	37,080	38,270	20,260	26,550	21,240	25,800	15,760
21	1,600	4,080	11,610	20,260	29,400	37,250	37,760	19,840	26,700	21,380	25,200	15,400
22	1,760	4,170	11,830	20,540	29,700	37,420	37,250	19,440	27,000	21,600	24,300	15,040
23	1,920	4,260	12,160	20,820	30,000	37,760	36,910	19,180	27,450	22,500	23,400	14,580
24	2,080	4,500	12,490	21,240	30,320	38,100	36,570	19,920	27,750	22,500	22,360	14,250
25	2,300	4,780	12,820	21,520	30,800	38,440	36,240	18,790	28,050	22,950	21,380	13,920
26	2,520	5,060	13,150	21,660	31,120	38,610	35,760	18,660	28,350	23,100	20,680	13,700
27	2,700	5,360	13,480	21,940	31,440	38,780	35,280	18,660	28,350	23,250	19,840	13,480
28	2,880	5,680	13,810	22,220	31,760	38,950	34,800	18,660	28,200	23,550	19,050	13,370
29	3,060	6,000	14,140	22,360	31,920	39,120	34,160	18,790	27,900	23,850	18,160	13,260
30	3,240	6,320	14,580	22,650	-	39,120	35,520	18,920	27,600	24,450	17,440	12,930
31	3,360	-	14,920	22,950	-	39,290	-	19,180	-	24,900	17,200	-

## SEVIER LAKE BASIN

Sevier River below Piute Dam, near Marysvale, Utah

Location.— Water-stage recorder, lat.  $38^{\circ}20'$ , long.  $112^{\circ}11'$ , in sec. 34, T. 28 S., R. 3 W., three-quarters of a mile below dam of Piute Reservoir and 8 miles south of Marysvale. Gage datum lowered 0.20 foot on Apr. 7, 1936.

Drainage area.— 2,440 square miles.

Records available.— May 1911 to September 1936.

Average discharge.— 24 years (1912-36), 256 second-feet.

Extremes.— 1911-36: Maximum discharge, 2,600 second-feet May 23, 24, 1922; practically no flow at times when reservoir gates are closed.

Remarks.— Records good. One small diversion between gage and Piute Reservoir. Flow regulated by operation of gates in dam.

Rating table, Apr. 7 to Sept. 30, 1936 (gage height, in feet, and discharge, in second-feet)

0	3	1.4	209
.1	7	1.6	258
.2	13	1.8	311
.4	31	2.0	367
.6	56	2.2	425
.8	87	2.4	485
1.0	123	2.6	547
1.2	164		

Oct. 1 to Apr. 6 same table was used but gage datum was lowered 0.2 foot on Apr. 7.

Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	131	97	65	21	21	21	6	350	56	303	10	298
2	171	97	65	21	21	21	6	396	20	322	10	214
3	198	97	65	21	21	21	6	405	15	274	10	160
4	216	119	65	21	21	21	6	405	12	295	19	160
5	216	162	65	21	21	21	6	405	7	376	108	177
6	216	162	65	21	21	21	6	408	7	425	125	193
7	216	177	65	21	21	21	64	408	7	470	91	243
8	226	202	65	21	21	21	143	408	7	488	84	219
9	261	202	65	21	21	21	113	408	7	470	71	198
10	261	193	65	21	21	21	115	408	7	301	68	171
11	236	171	65	21	21	21	115	405	7	26	77	156
12	154	147	65	21	21	21	115	405	7	13	119	127
13	106	147	65	21	21	21	153	408	7	117	104	
14	92	149	65	21	21	21	221	408	7	7	115	81
15	92	149	65	21	21	21	219	405	17	6	99	90
16	79	149	65	21	21	50	221	431	101	26	90	121
17	71	149	65	21	21	50	221	467	190	76	97	131
18	71	149	35	21	21	50	246	467	228	76	177	186
19	71	151	35	21	21	50	325	467	221	76	275	250
20	71	151	33	21	21	50	325	428	139	79	320	246
21	65	151	33	21	21	50	322	402	109	97	405	226
22	50	151	33	21	21	50	325	402	47	131	399	226
23	50	137	21	21	21	50	325	361	50	104	425	231
24	50	119	21	21	21	50	322	339	45	59	434	202
25	50	84	21	21	21	50	325	331	5	56	437	177
26	50	65	21	21	21	50	325	289	42	56	449	177
27	50	65	21	21	21	50	322	289	155	68	416	171
28	50	65	21	21	21	50	322	253	196	71	416	151
29	50	65	21	21	21	50	322	204	276	17	382	173
30	68	65	21	21	-	50	325	151	292	6	350	204
31	90	-	21	21	-	6	-	104	-	8	298	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
					October.....
October.....	3,778	261	50	122	7,490
November.....	3,987	202	65	133	7,910
December.....	1,463	65	21	47.2	2,900
Calendar year 1935.....	53,774	611	10	147	106,700
January.....	651	21	21	21.0	1,290
February.....	609	21	21	21.0	1,210
March.....	1,100	50	6	35.5	2,180
April.....	5,847	325	6	195	11,600
May.....	11,417	467	104	368	22,650
June.....	2,266	292	7	75.5	4,490
July.....	4,789	488	6	154	9,500
August.....	6,494	449	10	209	12,880
September.....	5,463	298	81	182	10,840
Water year 1935-36.....	47,864	488	6	131	94,940

## Sevier River near Vermilion, Utah

Location.— Water-stage recorder, lat.  $38^{\circ}52'$ , long.  $111^{\circ}57'$ , in SW $\frac{1}{4}$  sec. 19, T. 22 S., R. 1 W., at highway bridge 0.5 mile below Rockyford Dam, 2 miles northeast of Vermilion, and 5 miles above mouth of Lost Creek.

Drainage area.— 3,340 square miles.

Records available.— July to September 1912, July 1914 to September 1936.

Average discharge.— 22 years (1914-36), 118 second-feet.

Extremes.— Maximum daily discharge during year, 241 second-feet Mar. 17; minimum, 1 second-foot or less for several days when reservoir gates were closed.

1914-36: Maximum discharge, 2,400 second-feet May 30, 1922 (gage height, about 8.1 feet, former datum); practically no flow (seepage only) when Rockyford gates are closed.

Remarks.— Records good except those for Jan. 12 to Mar. 2, which were computed on basis of weekly gage readings, weather records, and records for station near Gunnison and are fair. Entire flow usually diverted during low-water season. Flow past station at such times represents seepage and return flow from canals. Flow also regulated by dams and reservoirs above.

Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	20	37	57	60	87	66	46	78	118	1	3	2
2	22	37	55	65	90	64	42	64	151	1	3	1
3	23	37	52	70	80	62	43	81	178	1	4	1
4	25	37	52	72	65	16	45	95	188	1	5	1
5	3	37	51	78	60	1	41	90	199	1	3	1
6	1	37	51	73	62	1	38	76	204	1	6	1
7	1	37	51	66	67	1	37	78	207	1	4	1
8	2	38	51	67	72	1	35	133	207	1	5	1
9	2	39	56	75	73	2	25	139	137	1	6	1
10	1	39	54	76	75	3	17	128	55	1	4	1
11	1	39	50	76	76	3	43	126	4	1	3	1
12	1	45	49	79	78	2	72	135	32	1	2	1
13	1	97	50	83	77	2	81	118	67	1	26	1
14	1	52	40	86	76	1	76	67	38	1	14	1
15	1	38	34	90	74	2	76	34	6	1	5	1
16	19	38	42	93	73	2	104	43	2	2	3	1
17	33	39	42	97	73	241	88	49	3	2	2	1
18	33	40	50	90	73	183	83	80	3	2	2	1
19	34	41	60	80	73	209	84	163	3	1	2	1
20	34	40	64	75	75	201	122	229	2	1	2	1
21	34	39	52	75	77	104	163	220	1	2	2	1
22	36	40	46	77	75	69	160	188	1	2	2	1
23	39	41	45	79	73	64	160	131	1	2	2	1
24	40	43	46	82	72	64	146	133	1	1	2	1
25	33	46	49	86	71	67	133	137	1	2	2	1
26	32	49	50	87	70	69	128	133	2	2	2	1
27	33	49	49	88	69	70	144	128	2	2	3	1
28	34	56	50	89	69	69	135	118	2	2	2	1
29	36	56	51	87	67	67	114	148	2	2	2	1
30	37	52	52	85	-	66	87	183	2	1	2	1
31	37	-	55	86	-	60	-	158	-	3	2	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in
					acres-feet
October.....	649	40	1	20.9	1,290
November.....	1,315	97	37	45.8	2,610
December.....	1,566	64	34	50.2	3,090
Calendar year 1935.....	16,615	229	1	45.5	33,000
January.....	2,470	97	60	79.7	4,900
February.....	2,122	90	60	73.2	4,210
March.....	1,832	241	1	59.1	3,650
April.....	2,566	163	17	85.5	5,090
May.....	3,683	229	34	119	7,310
June.....	1,819	207	1	60.6	3,610
July.....	44	3	1	1.4	.87
August.....	125	26	2	4.0	248
September.....	31	2	1	1	61
Water year 1935-36.....	18,212	241	1	49.8	36,120



## Sevier Bridge Reservoir near Juab, Utah

Location.- Staff gage, lat.  $39^{\circ}22'$ , long.  $112^{\circ}2'$ , in NW $\frac{1}{4}$  sec. 1, T. 17 S., R. 2 W., at Sevier Bridge Dam, 13 miles southwest of Juab.

Records available.- January 1914 to September 1936.

Remarks.- Reservoir capacity, 236,000 acre-feet. Gage-height record and capacity rating table furnished by Consolidated Sevier Bridge Reservoir Co.

## Contents, in acre-feet, October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	1,900	6,860	14,020	23,550	34,570	41,680	36,480	14,290	15,840	12,340	9,390
2	0	2,000	7,100	14,290	23,900	34,780	41,800	35,410	14,430	15,130	12,850	9,620
3	0	2,090	7,350	14,570	24,260	35,090	42,030	34,160	14,710	14,570	13,360	9,500
4	0	2,200	7,610	14,850	24,530	35,200	42,260	32,920	15,270	14,020	13,750	9,340
5	0	2,300	7,860	15,130	24,900	35,520	42,380	31,910	15,990	13,890	13,890	9,170
6	0	2,410	8,110	15,410	25,070	35,740	42,610	30,710	16,880	13,490	13,750	8,160
7	0	2,520	8,380	15,690	25,340	35,840	42,840	29,740	17,800	13,100	13,750	8,750
8	0	2,660	8,640	15,990	25,610	35,940	42,960	28,770	18,900	12,710	13,680	8,540
9	0	2,760	8,900	16,220	25,980	36,050	43,190	28,770	19,710	12,340	13,560	8,540
10	0	2,870	9,170	16,430	26,250	36,160	43,420	28,770	20,540	11,960	13,300	8,480
11	0	2,990	9,390	16,730	26,530	36,270	43,650	28,580	21,220	11,840	13,040	8,430
12	0	3,110	9,620	17,020	26,980	36,380	43,770	25,880	21,720	12,090	12,710	8,430
13	0	3,220	9,840	17,420	27,540	36,490	44,000	25,070	21,890	12,210	12,590	8,480
14	0	3,340	10,070	17,720	28,210	36,590	44,120	24,350	22,240	12,340	12,460	8,430
15	0	3,460	10,240	18,110	28,770	36,700	44,240	23,460	22,420	12,340	12,400	8,390
16	0	3,580	10,400	18,340	29,350	36,700	44,000	22,680	22,590	12,340	12,340	8,320
17	0	3,820	10,580	18,740	29,930	36,800	43,650	21,560	22,760	12,210	12,150	8,270
18	2	4,110	10,760	19,060	30,420	36,910	43,300	20,540	22,940	12,210	12,090	8,220
19	88	4,440	10,880	19,390	30,910	37,340	42,960	19,390	22,940	12,210	11,960	8,160
20	246	4,620	11,060	19,710	31,400	37,780	42,730	18,270	22,760	12,340	11,780	8,010
21	724	4,790	11,230	20,040	31,710	38,220	42,490	17,340	22,420	12,460	11,590	7,910
22	1,200	4,920	11,470	20,370	32,110	38,770	42,260	16,430	22,070	12,460	11,350	7,610
23	1,320	5,140	11,720	20,710	32,510	38,990	42,140	15,990	21,560	12,340	11,120	7,550
24	1,400	5,270	11,860	21,050	32,920	39,430	41,800	15,410	21,050	12,340	10,880	7,200
25	1,460	5,410	12,180	21,300	33,220	39,760	41,240	14,990	20,540	12,340	10,640	7,010
26	1,500	5,500	12,340	21,640	33,430	39,990	40,670	14,710	19,830	12,340	10,340	7,010
27	1,580	5,920	12,520	21,890	33,740	40,530	39,990	14,570	19,390	12,340	9,950	7,010
28	1,650	6,190	12,650	22,240	34,060	40,560	39,210	14,430	19,420	12,090	9,730	7,060
29	1,710	6,450	13,160	22,590	34,370	40,780	38,440	14,290	17,490	11,840	9,440	7,100
30	1,780	6,620	13,490	22,850	-	41,080	37,340	14,290	16,580	11,720	9,220	7,200
31	1,840	-	13,750	23,200	-	41,380	-	14,290	-	11,840	8,960	-

## Sevier River near Juab, Utah

Location.— Water-stage recorder, lat.  $39^{\circ}22'$ , long.  $112^{\circ}02'$ , in NE $\frac{1}{4}$  sec. 2, T. 17 S., R. 2 W., 1,600 feet downstream from Sevier Bridge Dam and 13 miles southwest of Juab.

Drainage area.— 5,120 square miles.

Records available.— September 1911 to September 1936.

Average discharge.— 25 years, 267 second-feet.

Extremes.— Maximum discharge recorded during year, 1,050 second-feet July 31 (gage height, 4.95 feet, stage higher during same day but not recorded. Flood caused by cloudburst on small area between dam and gaging station); minimum daily discharge, about 2 second-feet, at times in October and November.

1911-36: Maximum discharge, 2,140 second-feet June 2, 1922 (gage height, 8.50 feet); practically no flow when reservoir gates are closed.

Remarks.— Records fair. Discharge for periods when reservoir gates were closed, Oct. 17 to Apr. 13, Aug. 1-4, computed from one discharge measurement and a few miscellaneous gage readings. No diversions between this station and that near Gunnison. Flow regulated by Sevier Bridge Reservoir (capacity, 236,000 acre-feet).

Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	60					4	4	663	210	400	6	113
2	60					4	4	685	210	400	6	88
3	60					4	4	706	145	319	6	154
4	60					4	4	706	65	219	6	156
5	60					4	4	709	58	208	122	159
6	60					4	4	695	60	245	154	159
7	55					4	4	692	65	255	154	159
8	46					4	4	563	23	287	154	132
9	46					4	4	528	10	304	154	65
10	55					4	4	512	10	283	181	65
11	58					4	4	586	10	125	201	65
12	55					4	4	659	9	100	201	65
13	60					4	4	653	8	100	197	65
14	60					4	61	647	8	100	174	68
15	60					4	219	641	8	100	156	68
16	29					4	281	669	8	100	156	68
17	2					4	317	734	8	100	148	68
18	2					4	321	720	8	77	148	68
19	2					4	508	679	112	51	140	119
20	2					4	508	659	212	58	137	161
21	2					4	508	679	260	55	137	159
22	2					4	508	589	262	55	137	159
23	2					4	593	470	293	51	137	159
24	2					4	506	415	297	53	137	154
25	2					4	506	355	323	55	164	65
26	2					4	506	319	348	55	197	18
27	2					4	551	287	412	134	197	23
28	2					4	616	268	512	245	197	37
29	2					4	650	241	509	258	169	22
30	2					4	679	205	443	256	137	5
31	2					4	-	210	-	417	156	-
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....							917	60	2	29.6	1,820	
November.....							60	-	-	2	119	
December.....							93	-	-	3	184	
Calendar year 1935.....							36,053	580	2	98.8	71,510	
January.....							124	-	-	4	246	
February.....							116	-	-	4	230	
March.....							124	4	4	4	246	
April.....							6,880	679	4	229	13,640	
May.....							17,144	734	205	553	34,000	
June.....							4,896	512	8	163	9,710	
July.....							5,478	417	51	177	10,870	
August.....							4,366	201	6	141	8,660	
September.....							2,866	161	5	95.5	5,880	
Water year 1935-36.....							43,064	734	2	118	85,420	

## East Fork of Sevier River near Kingston, Utah

Location.— Water-stage recorder, lat.  $38^{\circ}12'$ , long.  $112^{\circ}9'$ , in SW $\frac{1}{4}$  sec. 13, T. 30 S., R. 3 W., 1 mile below highway bridge and  $\frac{1}{2}$  miles east of Kingston.

Drainage area.— 1,260 square miles.

Records available.— April 1913 to September 1936. Records obtained 1 $\frac{1}{2}$  miles above Rockyford Bridge March 1913 to April 1914, also three-quarters of a mile north of Kingston May to September 1912.

Average discharge.— 23 years, 93.5 second-feet.

Extremes.— Maximum discharge during year, 646 second-feet July 22 (gage height, 5.08 feet); minimum daily discharge, 9 second-feet Aug. 10 and 11.

1913-36: Maximum discharge, about 2,000 second-feet Aug. 27, 1929, from rating curve extended above 400 second-feet; minimum, 6 second-feet Oct. 30, 1930.

Remarks.— Records fair. Discharge for periods of ice effect, Dec. 1-3, Dec. 10 to Feb. 15, computed on basis of weather records. Discharge for Apr. 16 to May 2, June 13-18, Aug. 28-29, Sept. 8-15 computed on basis of miscellaneous gage readings and records of discharge at Otter Creek Reservoir. Station above all diversions in vicinity of Kingston. Flow regulated at Otter Creek Reservoir 8 miles above (capacity, 52,600 acre-feet).

## Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23	17	20		17	15	13	30	224	155	21	40
2	18	17	19		17	15	14	28	224	124	28	48
3	17	18	18		17	16	14	27	224	117	31	37
4	17	17	18		14	16	14	27	238	106	31	32
5	16	20	17		15	16	14	28	252	31	32	29
6	16	20	16		15	17	13	28	249	21	10	27
7	16	19	17		15	16	13	29	246	19	10	24
8	21	19	16		15	16	13	30	240	18	10	22
9	42	19	17		15	16	13	31	235	16	10	19
10	42	19	17		15	17	12	29	232	15	9	19
11	42	25	17		15	18	11	28	224	13	9	20
12	42	26	17		16	18	11	29	215	12	15	21
13	43	21	18		16	19	12	29	207	17	16	21
14	42	20	17		16	19	12	29	218	12	16	21
15	42	20	16		16	19	12	28	235	10	17	20
16	42	19	15		16	19	12	27	220	15	24	20
17	42	19	16		16	19	17	27	210	17	21	19
18	42	19	16		16	18	25	27	205	12	21	18
19	42	19	17		15	18	26	27	202	12	21	17
20	42	21	18		14	17	27	165	204	13	20	17
21	42	22	18		14	16	27	218	213	14	19	16
22	42	22	18		14	18	27	226	207	37	19	16
23	42	21	18		15	17	27	226	202	19	19	16
24	42	21	18		16	18	27	235	196	16	19	17
25	42	21	18		14	18	30	246	166	15	19	17
26	36	21	18		16	18	34	243	178	12	19	16
27	17	20	18		15	17	33	235	165	24	16	16
28	16	21	18		14	15	33	232	162	26	18	19
29	16	21	18		14	12	32	229	147	27	18	18
30	16	21	18		-	13	31	229	142	22	18	18
31	16	-	18		-	13	-	229	-	19	21	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
					October.....
October.....	976	45	16	31.5	1,940
November.....	605	26	17	20.2	1,200
December.....	540	20	15	17.4	1,070
Calendar year 1935.....	19,946	340	10	54.6	39,560
January.....	527	-	-	17	1,050
February.....	445	17	14	15.3	879
March.....	519	19	12	16.7	1,050
April.....	599	34	11	20.0	1,190
May.....	3,251	246	27	105	6,450
June.....	6,302	252	142	210	12,500
July.....	969	135	12	31.3	1,920
August.....	579	32	9	18.7	1,150
September.....	660	48	16	22.0	1,310
Water year 1935-36.....	15,970	252	9	43.6	31,680

## Beaver River near Beaver, Utah

Location.— Water-stage recorder, lat.  $37^{\circ}16'50''$ , long.  $112^{\circ}34'30''$ , in SE $\frac{1}{4}$  sec. 18, T. 29 S., R. 6 W., a quarter of a mile above city diversion dam at mouth of canyon and  $4\frac{1}{2}$  miles east of Beaver.

Drainage area.— 82 square miles.

Records available.— June to September 1906, March 1914 to September 1936.

Average discharge.— 22 years (1914-36), 54.9 second-feet.

Extremes.— Maximum discharge during year, 1,080 second-feet July 22 (gage height, 7.27 feet), from rating curve extended above 500 second-feet; minimum, 9 second-feet Oct. 17 (gage height, 3.35 feet).

1914-36: Maximum discharge, that of July 22, 1936; minimum, about 5 second-feet Aug. 29, 1931 (gage height, 3.19 feet).

Remarks.— Records good except those for periods of ice effect, Dec. 14 to Jan. 25, Jan. 30-31, Feb. 4-10, and for periods Mar. 25 to Apr. 13, July 23-24, Aug. 6-8, which were computed on basis of miscellaneous gage readings and weather records and are fair. No irrigation diversions above station. Water diverted by Telluride Power Co. but returned to stream several miles above station. Flow slightly regulated by operation of power plants and storage in Kents Lake.

## Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	21	22	19	19	18	16	18	129	116	80	80	63
2	20	22	19	17	19	17	18	142	131	73	73	59
3	20	18	19	17	21	18	19	183	127	66	88	53
4	20	17	17	18	17	18	19	230	131	60	87	51
5	20	25	18	21	18	18	19	286	131	65	86	49
6	19	24	16	20	19	18	20	272	195	78	80	48
7	19	22	19	19	20	18	22	200	318	68	72	48
8	19	21	19	18	20	19	25	173	435	88	65	48
9	19	19	18	20	21	20	30	185	445	96	92	38
10	19	16	19	21	21	21	35	222	445	133	73	38
11	18	21	21	22	22	21	45	251	428	133	68	38
12	17	21	17	22	20	21	53	259	361	102	63	36
13	17	19	17	21	19	21	70	275	326	28	65	34
14	19	21	18	22	19	21	81	292	289	60	55	32
15	21	24	17	22	18	22	88	281	256	86	54	33
16	22	19	17	22	17	22	80	272	232	87	55	31
17	15	18	17	21	21	25	103	259	210	93	53	31
18	21	19	17	20	19	27	102	238	183	98	52	30
19	21	18	17	19	20	26	112	235	168	84	49	28
20	21	19	18	19	19	27	103	220	157	90	53	27
21	21	21	17	20	19	27	118	185	142	88	51	28
22	21	19	18	19	19	26	127	162	133	153	49	28
23	21	19	18	18	18	25	127	157	123	100	44	28
24	21	20	18	19	17	24	148	150	116	80	43	27
25	21	19	18	18	19	23	157	155	107	129	46	25
26	20	19	18	20	19	22	152	133	102	87	48	27
27	21	19	18	19	19	20	168	127	98	88	49	29
28	22	19	18	19	18	19	164	121	103	105	50	29
29	23	19	18	19	17	17	159	121	118	105	50	27
30	24	20	18	19	-	18	140	123	88	88	55	29
31	17	-	18	19	-	18	-	127	-	84	74	-
Month								Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....								620	24	15	20.0	1,230
November.....								594	25	16	19.8	1,180
December.....								556	21	16	17.9	1,100
Calendar year 1935.....								18,663	387	15	51.1	37,020
January.....								609	22	17	19.6	1,210
February.....								553	22	17	19.1	1,100
March.....								655	27	16	21.1	1,300
April.....								2,522	168	18	84.1	5,000
May.....								6,165	292	192	199	12,230
June.....								6,234	445	88	208	12,360
July.....								2,855	153	60	92.1	5,660
August.....								1,922	92	43	62.0	3,810
September.....								1,092	63	25	36.4	2,170
Water year 1935-36.....								24,377	445	15	66.8	48,350

## BEAVER RIVER BASIN

47

## Beaver River at Adamsville, Utah

Location.— Water-stage recorder, lat.  $38^{\circ}16'$ , long.  $112^{\circ}48'$ , in S $\frac{1}{2}$  sec. 30, T. 29 S., R. 8 W., 100 yards below highway bridge on road from Milford to Beaver, a quarter of a mile above mouth of Indian Creek, and three-quarters of a mile south of Adamsville.

Drainage area.— 272 square miles.

Records available.— December 1913 to September 1936.

Average discharge.— 22 years, 37.0 second-feet.

Extremes.— Maximum discharge during year, 989 second-feet Sept. 1 (gage height, 5.79 feet), from rating curve extended above 500 second-feet; minimum daily discharge, 3 second-feet April 19, 20, May 1.  
1913-36: Maximum discharge, that of Sept. 1, 1936; no flow during periods in 1924, 1931, 1934, 1935.

Remarks.— Records fair. Discharge Nov. 20-22, Dec. 15-22, 29-30, Jan. 6-8, 18-19, 21 based on weather records. Discharge interpolated between weekly gage readings Sept. 15-30. No diversions between station and storage reservoir of Beaver County Irrigation Co. Several ditches above station divert practically entire flow during irrigation season to supply Adamsville and Beaver districts.

## Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	6	13	34	30	27	38	26	3	8	44	420	200
2	6	34	30	33	49	37	23	4	70	41	277	360
3	6	36	34	34	36	37	18	5	36	40	156	59
4	5	28	34	35	27	37	15	21	56	31	153	51
5	5	31	36	28	36	42	17	61	51	31	125	49
6	5	34	37	28	32	41	19	120	44	29	141	44
7	5	37	33	28	29	35	16	50	83	21	120	36
8	4	36	37	29	27	36	12	25	346	53	98	28
9	5	34	36	31	27	36	11	14	436	120	133	30
10	5	34	37	28	29	34	11	14	483	115	189	36
11	5	33	36	29	31	32	8	44	471	272	173	120
12	5	33	37	30	132	34	7	59	428	120	250	52
13	6	32	36	30	66	34	8	58	561	90	262	36
14	6	32	26	29	43	33	4	53	327	67	156	35
15	6	31	26	32	43	33	6	79	294	80	139	33
16	6	31	27	35	47	33	4	64	250	145	255	32
17	6	31	27	32	50	33	4	63	206	93	250	31
18	6	31	27	32	52	31	4	46	171	82	131	30
19	6	32	28	32	46	30	3	42	120	79	80	29
20	6	31	28	31	47	31	3	38	98	70	112	27
21	6	31	29	31	47	33	4	28	63	74	120	25
22	6	32	29	31	47	33	5	19	52	96	96	23
23	6	32	29	32	76	31	4	11	49	213	79	21
24	7	36	29	32	62	34	4	10	47	137	59	19
25	8	38	29	30	47	24	4	8	38	100	46	17
26	8	37	26	28	42	34	5	8	35	85	35	15
27	10	35	24	27	39	35	10	13	40	210	27	14
28	8	35	27	29	40	33	6	10	46	237	26	13
29	8	35	30	26	39	31	4	6	98	290	26	12
30	8	36	32	28	—	29	4	6	56	245	24	12
31	8	—	31	26	—	28	—	7	—	366	55	—

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	193	10	4	6.2	383
November.....	981	38	13	32.7	1,950
December.....	961	37	24	31.0	1,910
Calendar year 1935 .....	7,383	218	1	20.2	14,640
January.....	936	35	26	30.2	1,860
February.....	1,334	152	27	46.0	2,650
March.....	1,052	42	28	33.9	2,090
April.....	269	26	3	9.0	534
May.....	989	120	3	31.9	1,960
June.....	4,863	483	8	182	9,650
July.....	3,656	366	21	118	7,250
August.....	4,213	420	24	186	8,360
September.....	1,489	360	12	49.6	2,950
Water year 1935-36.....	20,936	483	3	57.2	41,530

## Beaver River at Rockyford Dam, near Minersville, Utah

Location.- Staff gage, lat.  $38^{\circ}14'$ , long.  $112^{\circ}50'$ , in NW $\frac{1}{4}$  sec. 11, T. 30 S., R. 9 W., 0.5 mile below Rockyford Dam and 4 miles east of Minersville.

Drainage area.- 512 square miles.

Records available.- December 1913 to September 1936.

Average discharge.- 22 years, 38.3 second-feet.

Extremes.- Maximum daily discharge during year, 114 second-feet Aug. 25-31 (gage height, 1.67 feet); minimum, 4 second-feet Oct. 1 to Jan. 13. 1913-36: Maximum discharge, 727 second-feet June 10, 1921 (gage height, 3.53 feet); minimum (estimated), 0.3 second-foot Mar. 19, 20, 1914.

Remarks.- Records fair. Gage read about once weekly, also read before and after each change in gate openings; discharge interpolated for intervening days. No diversions between dam and gage. Flow regulated by operation of gates at Rockyford Dam. Gage-height record furnished by Beaver County Irrigation Co.

Rating table, water year 1935-36 (gage height, in feet, and discharge, in second-feet)

0.6	0	1.2	41
.7	2	1.3	54
.8	5	1.4	68
.9	11	1.6	101
1.0	19	1.8	138
1.1	29		

## Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	4	4	4	4	7	10	17	94	60	92	11	45
2	4	4	4	4	7	10	17	92	60	92	11	16
3	4	4	4	4	7	10	18	92	60	92	43	16
4	4	4	4	4	7	11	19	92	60	92	29	16
5	4	4	4	4	7	11	19	92	60	92	29	16
6	4	4	4	4	7	12	19	84	60	92	29	16
7	4	4	4	4	7	12	19	72	60	93	29	50
8	4	4	4	4	7	12	19	68	60	103	34	79
9	4	4	4	4	7	12	19	68	60	103	36	79
10	4	4	4	4	7	12	19	63	60	90	35	79
11	4	4	4	4	7	13	19	61	60	72	34	79
12	4	4	4	4	7	13	19	61	51	67	32	79
13	4	4	4	4	7	13	19	61	46	67	30	79
14	4	4	4	5	7	13	19	72	46	76	29	79
15	4	4	4	5	7	13	19	74	46	81	38	79
16	4	4	4	6	7	13	19	74	46	81	44	79
17	4	4	4	6	7	14	19	77	46	82	70	79
18	4	4	4	6	8	14	29	79	46	82	88	79
19	4	4	4	6	8	15	35	82	46	82	91	79
20	4	4	4	6	8	15	35	84	46	82	91	79
21	4	4	4	6	9	15	60	84	46	82	91	79
22	4	4	4	6	9	15	73	84	46	82	91	79
23	4	4	4	6	9	15	74	69	33	80	101	79
24	4	4	4	6	9	16	90	60	23	76	110	79
25	4	4	4	6	9	16	108	60	23	73	114	79
26	4	4	4	6	10	16	106	60	62	66	114	79
27	4	4	4	6	10	17	103	60	62	63	114	79
28	4	4	4	6	10	17	99	60	62	53	114	79
29	4	4	4	7	10	17	99	60	62	38	114	79
30	4	4	4	7	-	17	99	60	89	11	114	79
31	4	-	4	7	-	17	-	60	-	11	114	-

	Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in
						acre-feet
October.....		124	4	4	4.0	246
November.....		120	4	4	4.0	238
December.....		124	4	4	4.0	246
Calendar year 1935.....		6,900	107	4	12.9	13,690
January.....		161	7	4	5.2	319
February.....		228	10	7	7.9	45.2
March.....		426	17	10	13.7	845
April.....		1,330	108	17	44.3	2,640
May.....		2,259	94	60	72.9	4,490
June.....		1,647	89	23	54.9	3,270
July.....		2,350	103	11	75.8	4,660
August.....		2,024	114	11	65.3	4,010
September.....		1,992	79	16	66.4	3,950
Water year 1935-36.....		12,785	114	4	34.9	25,360

## Coal Creek near Cedar City, Utah

Location.—Staff gage, lat.  $37^{\circ}40'25''$ , long.  $113^{\circ}2'10''$ , in NE $\frac{1}{4}$  sec. 13, T. 36 S., R. 11 W., at flood-control dam  $1\frac{1}{2}$  miles southeast of Cedar City and  $3\frac{1}{2}$  miles below South Creek.

Drainage area.—92 square miles.

Records available.—May 1935 to September 1936. Records for site used May 1915 to November 1919 do not include the flow of power canal (now abandoned), which should be added in order to make them comparable with those for present site.

Extremes.—Maximum discharge observed during period May to September 1935, 840 second-feet Aug. 25 (gage height, 310 feet); minimum discharge observed, 9 second-feet Sept. 7, 9-13, 15-21.

Maximum discharge observed during water year October 1935 to September 1936, 2,910 second-feet July 9 (gage height, 6.4 feet); minimum discharge observed, 4 second-feet Dec. 15.

1935-36: Maximum discharge observed, that of July 9, 1936; minimum observed, that of Dec. 15, 1935.

Remarks.—Records fair. Gage usually read once daily; on several days during the period readings were not obtained and on several days gage was read twice daily. Station is above diversions.

## Discharge, in second-feet, water year October 1934 to September 1935

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								-	186	26	14	13
2								-	210	*24	*14	12
3								-	210	*22	14	11
4								-	195	19	14	10
5								-	186	20	14	10
6								-	195	*19	13	10
7								-	180	19	12	9
8								-	180	17	12	10
9								-	154	16	12	9
10								-	132	15	13	9
11								-	116	*15	11	9
12								-	111	15	10	9
13								-	106	21	10	9
14								-	99	23	10	10
15								-	79	17	165	9
16								-	*74	*16	66	9
17								-	*70	15	13	9
18								-	66	14	12	9
19								-	59	25	11	9
20								-	52	+150	11	6
21								-	**44	17	10	9
22								-	**44	17	10	10
23								274	41	15	21	20
24								342	*27	14	+50	12
25								258	34	*14	+250	10
26								274	*33	*14	+150	10
27								258	33	14	23	10
28								274	27	+100	12	10
29								291	*27	+80	12	10
30								242	*26	66	11	10
31								180	-	15	17	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....					
November.....					
December.....					
Calendar year .....					
January.....					
February.....					
March.....					
April.....					
May 23-31.....	2,393	342	150	266	4,750
June.....	3,096	210	26	100	5,980
July.....	874	150	14	28.2	1,730
August.....	1,017	250	10	32.8	2,020
September.....	305	20	9	10.2	605
The period.....					15,060

\*Interpolated.

†Computed from graph based on gage readings and precipitation records.

\*\*Computed on basis of weather records.

## ESCALANTE DESERT BASIN

Coal Creek near Cedar City, Utah

(Continued)

## Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9	10	-	-	-	16	13	97	34	13	17	10
2	9	10	-	-	9	*18	10	124	32	13	15	9
3	10	10	-	-	-	*21	25	148	30	12	*15	*8
4	9	10	-	-	-	*24	*26	165	37	*812	*15	8
5	9	10	-	-	-	*23	*20	177	33	12	*15	8
6	8	10	-	-	-	*22	*20	116	30	12	*18	8
7	8	10	-	-	-	*21	20	76	30	12	17	8
8	9	10	-	-	11	21	20	97	26	*76	*18	7
9	9	10	-	8	-	*21	24	89	25	*400	*45	7
10	9	10	-	-	-	*21	30	97	26	*600	*40	6
11	9	10	-	-	-	*22	40	104	26	82	*20	25
12	9	10	-	-	-	*21	72	97	25	*20	*200	9
13	9	10	-	-	-	*21	68	97	23	*15	*30	7
14	9	10	-	-	-	*21	74	89	23	*12	*15	7
15	9	11	4	-	-	21	76	101	22	10	13	7
16	9	13	-	-	-	20	94	89	21	*25	11	*87
17	9	12	-	-	-	22	79	76	21	*25	11	*87
18	9	11	-	-	-	23	87	70	20	*25	10	*86
19	10	12	-	7	-	19	85	66	*20	*150	10	*86
20	9	13	-	-	-	23	92	61	*19	*20	10	6
21	9	13	-	-	-	17	99	52	18	*15	9	6
22	9	13	8	-	-	19	116	48	18	*100	9	6
23	9	14	-	-	14	8	134	45	17	*15	9	6
24	9	14	-	-	-	13	154	42	17	*15	8	6
25	11	14	-	-	-	14	127	42	15	*20	7	6
26	9	14	-	-	-	14	137	45	15	*15	8	*86
27	9	14	-	-	-	12	132	45	14	*50	8	6
28	8	13	-	-	-	11	121	40	14	*20	8	*86
29	8	14	-	-	-	14	124	37	14	*20	*25	*86
30	9	15	-	-	-	14	97	34	13	*50	9	*86
31	11	-	-	-	-	12	-	35	-	*18	*9	-

  

Month		Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....		281	11	8	9.1	557
		350	15	10	11.7	694
		310	-	-	*10	615
Calendar year .....						
January.....		248	-	-	*8	492
		348	-	-	*12	690
		569	24	8	18.4	1,130
		2,216	154	10	73.9	4,400
		2,501	177	34	80.7	4,960
		678	37	13	22.6	1,340
		1,835	600	10	59.1	3,640
		654	200	7	21.1	1,300
		226	25	6	7.5	448
		10,214	600	-	27.9	20,260
Water year 1935-36.....						

\*Computed on basis of weather records.

†Computed from graph based on gage readings and precipitation records.

\*\*Interpolated.

## Salton Sea, Calif.

Location.- Benchmark set by Imperial Irrigation District, lat.  $33^{\circ}26'55''$ , long.  $116^{\circ}2'20''$ , in NW $\frac{1}{4}$  sec. 27, T. 8 S., R. 9 E., 1 mile northeast of Figtree John Spring and about 9 miles south of Mecca.

Records available.- November 1904 to September 1936.

Extremes.- Maximum stage, 195.0 feet below sea level in February and March 1907; minimum (since 1906), 250.7 feet below sea level in November 1924, bottom of sea (from 1904-5 determinations) is 273.5 feet below sea level.

Remarks.- See Water-Supply Paper 735 for condensed history of Salton Sea and all records to 1932. Area of water surface is 266 square miles when sea is at elevation 250 feet below sea level and 328 square miles when at elevation 240 feet below sea level. Elevations in the following table, furnished by Imperial Irrigation District, were determined directly by leveling from the benchmark.

Elevation, in feet, below mean sea level, 1935-36:

Oct. 1, 1935	248.85
Nov. 1, 1935	249.00
Dec. 2, 1935	248.6
31, 1935	248.5
Jan. 31, 1936	247.8
Feb. 29, 1936	247.6
Apr. 1, 1936	247.7
May 1, 1936	247.5
June 1, 1936	247.6
July 1, 1936	247.9
Aug. 1, 1936	248.1
Sept. 2, 1936	248.4
Oct. 1, 1936	248.7

## Palm Canyon Creek near Palm Springs, Calif.

Location.— Water-stage recorder, lat.  $33^{\circ}44'55''$ , long.  $116^{\circ}32'15''$ , in S $\frac{1}{4}$  sec. 11, T. 5 S., R. 4 E., three-quarters of a mile above Murray Canyon Creek and 8 miles south of Palm Springs. Altitude, about 700 feet.

Drainage area.— 94.0 square miles.

Records available.— January 1930 to September 1936.

Extremes.— Maximum discharge during year, 935 second-feet Feb. 15 (gage height, 3.25 feet); no flow for several months.

1930-36: Maximum discharge, 1,870 second-feet Feb. 9, 1932; no flow several months each year.

Remarks.— Records fair. Discharge estimated Nov. 18, 19, Feb. 9-14, 19-24, Mar. 5-30, Apr. 2, 3, 5, 6, 13, 14, and May 4-6.

Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		0	0.1	0.2	1.0	2.7	8.5	1.8	0.3	0	0	
2		0	.1	.2	2.5	2.7	5	1.5	.5	0	0	
3		0	.1	.2	1.6	2.2	3.0	1.5	.2	0	0	
4		0	.1	.2	1.2	2.0	62	1.4	.5	0	0	
5		0	.1	.2	.7	1.8	15	1.3	.2	0	0	
6		0	.1	.2	.5	1.5	11	1.2	.2	0	0	
7		0	.1	.2	.5	1.4	11	1.1	.1	0	0	
8		0	.1	.2	.5	1.4	11	1.1	.1	0	0	
9		0	.2	.2	.5	1.5	10	1.0	.1	0	0	
10		0	.2	.2	.5	1.5	9	.8	0	0	0	
11		0	.2	.2	5	1.2	9	.7	0	0	0	
12		0	.2	.2	2.5	1.2	7	.7	0	0	0	
13		0	.2	.3	1.5	1.2	6	.6	0	0	0	
14		0	.2	.3	.6	1.1	5.5	.6	0	0	0	
15		0	.2	.3	109	1.1	4.8	.5	0	0	0	
16		0	.2	.2	38	1.2	3.3	.5	0	0	0	
17		0	.2	.2	15	1.3	3.0	.5	0	0	0	
18		.1	.2	.3	83	1.2	2.8	.6	0	0	0	
19		.1	.2	.3	12	1.3	2.7	.5	0	0	0	
20		.1	.2	.3	9.5	1.2	2.7	.4	0	0	0	
21		.1	.2	.3	8.5	1.2	2.7	.3	0	0	0	
22		.1	.2	.3	8	1.2	2.5	.3	0	0	0	
23		.1	.2	.2	7.5	1.2	2.5	.3	0	0	0	
24		.1	.2	.2	7.5	2.0	2.3	.3	0	0	0	
25		.1	.2	.2	7	1.5	2.3	.3	0	0	0	
26		.1	.2	.2	6	1.2	2.2	.3	0	29	0	
27		.1	.2	.2	5	1.1	2.2	.3	0	0	0	
28		.1	.2	.2	4.2	1.1	2.2	.3	0	0	0	
29		.1	.2	.2	3.0	1.0	2.2	.3	0	0	0	
30		.1	.2	.2	1.0	2.0	2.0	.3	0	0	0	
31		—	.2	.2	—	20	—	.3	—	0	2.8	
Month												Second-foot-days
												Maximum
												Minimum
												Mean
												Run-off in acre-feet
												Oct.
												0
												2.6
												11
												.04
												.17
												346.2
												38
												.95
												687
												7.0
												.3
												2
												.23
												14
												341.3
												109
												.3
												11.8
												677
												62.8
												1.0
												2.03
												126
												215.4
												62
												2.0
												7.18
												427
												21.6
												.3
												.70
												43
												1.8
												.06
												3.6
												29
												.94
												58
												2.8
												.09
												0
												0
												0
												2.8
												0
												1,370
												Water year 1935-36
												688.4
												109
												0
												1.88
												1,370

## MOJAVE RIVER BASIN

53

## Deep Creek near Hesperia, Calif.

Location.— Water-stage recorder, lat.  $34^{\circ}20'30''$ , long.  $117^{\circ}13'40''$ , in SE $\frac{1}{4}$  sec. 18 T.  
S. N., R. 3 W., 0.5 mile above junction with West Fork of Mojave River and 8 miles  
southeast of Hesperia. Altitude, about 3,050 feet.

Drainage area.— 137 square miles.

Records available.— December 1929 to September 1936.

Extremes.— Maximum discharge during year, 2,170 second-feet Feb. 12 (gage height, 6.10  
feet); minimum, 0.1 second-foot at times.

1929-36: Maximum discharge, 7,900 second-feet Feb. 9, 1932 (gage height, 11.30  
feet); minimum, 0.1 second-foot at times during 1932, 1933, 1934, 1936.

Remarks.— Records good. Daily discharge estimated July 14-27, Aug. 3-5, 19-22, and  
24. Storage in Lake Arrowhead. Hesperia Water Co.'s canal diverts about 2 miles  
above station.

## Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.8	3.7	5	7.5	6	74	71	29	10	0.9	0.2	0.7
2	.9	3.7	5	7.5	431	76	67	28	10	.8	.1	.6
3	.8	3.8	5	7	146	79	72	27	10	.8	.1	.7
4	.6	4.2	6.5	7	48	78	146	26	11	.8	.1	.8
5	.6	4.3	9	7	28	72	111	24	10	.7	.1	.8
6	.6	4.5	7	7	21	69	97	24	9.5	.7	.1	.8
7	.5	4.8	6.5	6.5	18	66	99	22	8.5	.6	.2	.8
8	.5	5	6	5.5	15	62	143	21	9	.6	.3	.8
9	.5	5	6	5.5	14	61	161	21	8.5	.6	.3	.7
10	.4	5	6	5.5	13	61	161	20	7.5	.7	.3	.7
11	.5	5	5.5	5.5	79	64	158	20	6.5	.8	.3	15
12	.6	5	5.5	5.5	669	61	149	19	6	.8	.5	14
13	.7	5	5.5	5.5	192	58	131	18	5.5	.8	.2	9.5
14	.8	5	5.5	5.5	185	55	108	16	4.6	.8	.2	8
15	1.0	4.8	5.5	5	224	54	99	16	4.5	.8	.2	5
16	1.7	4.8	5	5	135	50	89	15	4.0	.7	.3	2.2
17	2.1	5	5	5	146	48	81	14	3.2	.7	.2	1.4
18	2.2	4.8	5.5	5	106	45	72	14	3.1	.6	.2	1.0
19	2.2	5.5	6.5	5	93	45	62	13	2.8	.6	.1	.9
20	2.2	5.5	6.5	5	72	43	58	13	2.6	.6	.1	.8
21	2.2	5.5	6.5	5	67	43	54	13	2.5	.5	.1	.8
22	2.2	5.5	6.5	71	50	49	12	2.4	.5	.1	.7	
23	2.2	5.5	6	5	350	48	48	11	1.9	.4	.1	.6
24	2.4	5.5	6	5	224	39	44	10	1.6	.4	.1	.6
25	2.6	5.5	6	5	125	39	42	9.5	1.5	.4	.2	.6
26	3.1	5.5	6	5.5	91	41	38	9	1.4	.4	.3	.6
27	3.4	5.5	6	5.5	81	39	37	9	1.2	.4	.3	.6
28	3.5	5	6	5.5	98	43	35	9	1.1	.3	.3	.6
29	3.4	5	6.5	6	83	52	31	9	1.1	.3	.4	.6
30	3.5	5	8	6	-	55	30	9	1.1	.3	.6	-
31	3.5	-	8	5.5	-	78	-	9.5	-	.3	.8	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	52.2	3.5	0.4	1.68	104
November.....	147.9	5.5	3.7	4.93	293
December.....	189.5	9	5	6.11	376
Calendar year 1935.....	17,758.1	1,180	.3	48.7	35,170
January.....	177.0	7.5	5	5.71	351
February.....	3,881	669	6	134	7,700
March.....	1,748	79	39	56.4	3,470
April.....	2,541	161	30	84.7	5,040
May.....	510.0	29	9	16.5	1,010
June.....	152.6	11	1.1	5.09	303
July.....	18.6	.9	.3	.60	.37
August.....	7.2	.8	.1	.23	.14
September.....	71.4	15	.5	2.38	142
Water year 1935-36.....	9,496.4	669	.1	25.9	18,840

## MOJAVE RIVER BASIN

Mojave River at Victorville, Calif.

Location.- Water-stage recorder, lat.  $34^{\circ}32'0''$ , long.  $117^{\circ}17'10''$ , in NW $\frac{1}{4}$  sec. 10, T. 5 N., R. 4 W., 500 feet above Bear Valley highway bridge at Victorville.

Records available.- November 1930 to September 1936.

Extremes.- Maximum discharge during year, 195 second-feet Feb. 23 (gage height, 1.18 feet); minimum, 18 second-feet June 23 and 24.

1930-36: Maximum discharge, 12,500 second-feet Feb. 9, 1932; minimum, 15 second-feet Aug. 13, 1932, and Aug. 4, 1933.

Remarks.- Records good. Storage at Lake Arrowhead and diversion from Deep Creek by Hesperia Water Co.

## Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23	25	30	37	37	33	32	25	23	21	20	21
2	24	30	30	37	32	34	33	25	23	21	19	21
3	25	33	30	35	33	35	33	24	23	21	19	21
4	25	35	32	33	37	35	33	24	23	21	19	21
5	25	35	33	33	37	36	34	24	23	22	19	21
6	27	37	33	35	32	34	34	23	24	22	19	22
7	29	33	33	35	33	33	35	23	24	22	19	22
8	30	39	33	35	35	33	30	25	22	22	19	22
9	27	37	35	35	35	35	29	34	22	25	22	19
10	25	30	33	33	33	28	34	22	25	23	19	22
11	25	32	35	35	33	26	33	21	24	23	19	22
12	29	32	37	33	61	24	32	21	24	23	19	23
13	30	35	35	35	43	24	32	21	23	24	19	23
14	32	35	35	35	41	24	30	22	23	24	19	24
15	33	35	35	35	41	25	29	23	22	24	20	24
16	32	33	35	35	41	25	29	24	22	23	21	24
17	29	33	35	37	41	25	28	26	21	23	21	24
18	25	33	35	37	43	25	28	26	21	23	21	24
19	24	32	33	35	43	25	25	25	20	22	21	24
20	24	35	33	35	41	26	27	25	20	22	21	24
21	25	35	33	35	41	26	27	24	19	22	21	24
22	25	35	33	39	41	27	26	24	19	22	21	24
23	25	35	33	37	70	28	26	23	18	22	21	24
24	25	35	33	35	49	30	26	22	18	22	21	25
25	24	33	33	35	41	30	25	22	20	21	21	25
26	25	33	33	33	35	32	25	22	22	21	21	25
27	35	33	35	35	35	32	25	22	22	21	21	25
28	37	35	35	32	34	30	25	22	21	21	21	25
29	29	35	33	33	33	30	25	23	21	21	21	25
30	29	35	33	35	-	29	25	23	21	20	21	25
31	27	-	35	37	-	29	-	23	-	20	21	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						849	37	23	27.4	1,680		
November.....						1,011	39	25	33.7	2,010		
December.....						1,037	37	30	33.5	2,060		
Calendar year 1935.....						16,825	846	15	46.1	33,370		
January.....						1,086	39	32	35.0	2,150		
February.....						1,147	70	32	39.6	2,280		
March.....						899	36	24	29.0	1,780		
April.....						888	35	25	29.6	1,760		
May.....						718	26	21	23.2	1,420		
June.....						659	25	18	22.0	1,310		
July.....						681	24	20	22.0	1,350		
August.....						623	21	19	20.1	1,240		
September.....						698	25	21	23.3	1,380		
Water year 1935-36.....						10,296	70	18	28.1	20,420		

## Mojave River at Barstow, Calif.

Location.— Water-stage recorder, lat.  $34^{\circ}54'25''$ , long.  $117^{\circ}1'20''$ , in SW $\frac{1}{4}$  sec. 31, T. 10 N., R. 1 W., on U. S. Highway 91 at Barstow.

Records available.— November 1930 to September 1936.

Extremes. 1930-36: Maximum discharge, 8,300 second-feet Feb. 9, 1932 (gage height, 3.95 feet); no flow several months each year.

Remarks.— No flow during year. Considerable diversion for irrigation above station.

## West Fork of Mojave River near Hesperia, Calif.

Location.— Water-stage recorder, lat.  $34^{\circ}20'20''$ , long.  $117^{\circ}14'35''$ , in SE $\frac{1}{4}$  sec. 13, T. 3 N., R. 4 W., at highway bridge 0.5 mile above junction with Mojave River and 7 miles southeast of Hesperia. Altitude, about 3,050 feet.

Drainage area.— 74.8 square miles.

Records available.— January 1930 to September 1936.

Extremes.— Maximum discharge during year, 418 second-feet Feb. 11 (gage height, 2.98 feet); no flow for several months.

1930-36: Maximum discharge, 6,000 second-feet Feb. 8, 1932 (gage height, 10.00 feet); no flow during each summer.

Remarks.— Records good. Discharge estimated Mar. 19-23, May 7-23.

## Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1					0	18	27	3.1				
2					46	15	20	2.4				
3					12	13	18	2.0				
4					2.7	11	162	1.6				
5					0	9.5	118	1.1				
6					0	8	74	.8				
7					0	7.5	53	.7				
8					0	6.5	44	.6				
9					0	6	37	.5				
10					0	5	32	.4				
11					45	4.5	26	.3				
12					146	3.5	23	.2				
13					99	3.1	20	.2				
14					95	2.9	15	.2				
15					188	2.7	13	.2				
16					163	2.4	11	.1				
17					98	2.4	10	.1				
18					88	2.0	8.5	.1				
19					88	1.9	8.5	.1				
20					70	1.7	8	.1				
21					51	1.6	7	.1				
22					39	1.6	6.5	.1				
23					126	1.6	5.5	.1				
24					111	2.7	5	0				
25					65	7.5	4.5	0				
26					46	6	4.0	0				
27					38	2.7	3.5	0				
28					31	2.4	3.1	0				
29					23	2.2	3.1	0				
30					—	2.6	3.3	0				
31					—	38	—	0				

Month		Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....		0	0	0	0	0
November.....		0	0	0	0	0
December.....		0	0	0	0	0
Calendar year 1935 .....		8,449.8	466	0	23.2	16,760
January.....		0	0	0	0	0
February.....		1,670.7	188	0	57.6	3,310
March.....		195.5	38	1.6	6.31	388
April.....		773.5	162	3.1	25.8	1,530
May.....		15.1	3.1	0	.49	30
June.....		0	0	0	0	0
July.....		0	0	0	0	0
August.....		0	0	0	0	0
September.....		0	0	0	0	0
Water year 1935-36 .....		2,654.8	188	0	7.25	5,260

## ANTELOPE VALLEY BASIN

Rock Creek near Valyermo, Calif.

Location.- Water-stage recorder, lat.  $34^{\circ}25'10''$ , long.  $117^{\circ}50'25''$ , in NE $\frac{1}{4}$  sec. 20, T. 4 N., R. 9 W.,  $1\frac{1}{8}$  miles southeast of Valyermo. Altitude, about 4,050 feet.

Drainage area.- 23.0 square miles.

Records available.- January 1923 to September 1936.

Average discharge.- 13 years, 11.0 second-feet.

Extremes.- Maximum discharge during year, 70 second-feet Feb. 23 (gage height, 1.85 feet); minimum, 2.0 second-feet July 21 and 22 (gage height, 0.88 foot).

1923-36: Maximum discharge, 510 second-feet Feb. 16, 1927; minimum, 1.2 second-feet Aug. 22, 1925.

Remarks.- Records fair. No diversions. Discharge estimated Feb. 3, 20-22, Feb. 24 to Mar. 4, and May 17-28. Results of 14 discharge measurements furnished by Los Angeles County Flood Control District.

Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	9	6.5	6.5	4.8	6	13	9	9	5.5	3.4	2.7	2.7
2	8.5	6.5	6	5	32	13	9	9	5.5	3.6	2.7	2.7
3	8.5	6.5	6	4.8	16	13	9.5	9	5	3.6	2.8	2.8
4	8	6.5	6.5	5	11	12	10	9	5	3.4	2.8	3.0
5	8	6.5	6	5.5	9.5	12	10	9	4.8	3.2	2.8	2.8
6	7.5	6.5	6.5	5	8.5	12	10	9	4.8	3.2	2.8	2.8
7	7	6	6	5	7.5	12	9.5	9	4.8	3.0	2.7	2.8
8	7	6	6	5	7	11	10	9	4.8	3.0	2.8	2.8
9	6.5	6	5.5	4.6	7	11	11	9.5	4.4	3.0	2.8	2.8
10	6.5	6	5.5	4.6	6.5	12	11	8	4.4	3.0	2.8	2.8
11	6.5	6	5.5	4.6	23	12	12	8	4.2	2.8	2.5	2.8
12	6.5	6	5	4.6	45	11	12	7.5	4.2	2.8	2.4	2.8
13	6.5	5.5	4.8	4.6	28	12	13	7	4.2	2.7	2.4	3.0
14	6	5.5	4.6	4.6	25	11	13	7	3.8	2.5	2.4	3.0
15	6	5.5	4.2	4.4	24	11	14	6.5	3.8	2.5	2.4	2.8
16	6.5	5.5	4.0	4.4	23	11	13	6	3.8	2.5	2.4	2.7
17	6	5.5	4.0	4.6	20	11	13	6	3.8	2.4	2.4	2.7
18	6.5	5	4.0	4.6	20	11	13	6	4.0	2.4	2.4	2.5
19	6	5	4.2	4.6	16	11	12	6	3.8	2.4	2.4	2.7
20	6	5	4.2	4.8	15	11	12	6	4.0	2.2	2.2	2.5
21	6	5	4.4	4.6	14	12	11	5.5	3.8	2.2	2.4	2.5
22	6	5	4.4	4.6	18	12	11	5.5	3.8	2.4	2.4	2.5
23	6	5.5	4.4	4.4	55	12	11	5.5	3.8	2.4	2.5	2.4
24	6	5.5	4.4	4.4	36	11	11	5.5	3.6	2.5	2.4	2.4
25	6	6	4.6	4.4	30	11	10	5.5	3.6	2.5	2.5	2.4
26	6	6	4.6	4.4	22	10	10	5.5	3.6	2.7	2.7	2.4
27	5.5	6	4.6	4.4	19	10	10	5.5	3.6	2.7	2.7	2.4
28	6	6.5	4.8	4.2	16	9.5	9.5	5.5	3.6	2.7	2.8	2.4
29	7	6.5	5.5	4.2	14	9	9.5	5.5	3.4	2.7	2.8	2.4
30	6.5	6.5	5	4.2	-	10	9.5	5.5	3.6	2.8	2.7	2.4
31	6.5	-	5	4.2	-	12	-	5.5	-	2.8	2.7	-
Month				Second-foot-days			Maximum		Minimum		Mean	
				207.0	9	5.5	6.68	411				
				176.0	6.5	5	5.87	349				
				156.7	6.5	4.0	5.05	311				
Calendar year 1935.....				8,252.2	196	4.0	22.6	16,360				
				145.1	5.5	4.2	4.62	284				
				576	55	6	19.9	1,140				
				351.5	13	9	11.3	697				
				328.5	14	9	11.0	652				
				215.0	9	5.5	6.94	426				
				125.0	5.5	3.4	4.17	248				
				86.0	3.6	2.2	2.77	171				
				79.9	2.8	2.2	2.58	158				
				79.7	3.0	2.4	2.66	158				
Water year 1935-36.....				2,524.4	65	2.2	6.90	5,000				

## Owens River near Round Valley, Calif.

Location. - Water-stage recorder, lat.  $37^{\circ}26'25''$ , long.  $118^{\circ}33'20''$ , in SE $\frac{1}{4}$  sec. 10, T. 8 S., R. 31 E., below Sheep Bridge, 700 feet above mouth of Rock Creek, and 2 miles north of Round Valley. Altitude, about 4,450 feet.

Drainage area. - About 450 square miles.

Records available. - August 1903 to September 1923, April 1927 to September 1936.

Average discharge. - 29 years, 225 second-feet.

Extremes. - Maximum discharge during year, 640 second-feet June 25 (gage height, 3.38 feet); minimum, 46 second-feet Sept. 6.

1903-23, 1927-36: Maximum discharge recorded, 1,190 second-feet June 30, 1907 (gage height, 4.0 feet); minimum, 5.4 second-feet Feb. 13, 1923.

Remarks. - Record affected by power development in Owens River gorge and diversions from tributaries for irrigation in Long Valley above station (see also Rock Creek at Sherwin Hill, near Bishop, Calif.). Daily-discharge record furnished by city of Los Angeles.

## Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	132	116	125	118	146	165	172	182	340	378	220	116
2	135	123	125	123	159	165	212	180	303	354	215	114
3	128	120	125	135	131	163	210	189	279	340	202	119
4	125	118	137	136	133	163	218	198	270	328	195	132
5	123	118	135	145	140	163	205	215	267	324	182	142
6	120	132	130	136	144	163	193	223	249	324	182	140
7	120	137	125	128	148	163	220	223	234	328	178	145
8	120	137	130	126	155	163	282	210	231	328	171	140
9	120	132	128	131	146	163	340	202	228	315	185	137
10	123	128	130	136	144	165	378	210	228	312	196	134
11	123	125	137	135	153	165	415	218	243	297	195	129
12	123	128	147	131	155	165	434	223	264	279	185	127
13	123	125	135	135	155	165	434	234	294	264	180	124
14	125	123	128	136	157	170	471	249	318	258	171	127
15	137	125	123	147	167	172	488	255	344	237	162	122
16	135	125	116	146	163	178	467	264	350	228	171	122
17	132	137	118	137	155	180	415	267	360	225	165	124
18	130	137	121	144	163	191	376	273	374	215	150	122
19	128	130	115	142	157	200	336	282	374	223	150	119
20	128	132	123	142	157	200	297	276	389	228	150	124
21	123	132	118	138	159	207	287	276	404	258	150	116
22	118	135	117	136	180	228	218	270	422	360	145	116
23	116	135	117	136	184	207	215	270	438	324	140	116
24	123	135	117	134	170	198	210	273	467	294	134	116
25	130	130	117	136	174	187	198	282	480	276	129	119
26	132	128	115	134	170	182	202	297	463	258	132	114
27	130	125	120	134	165	182	202	318	455	255	124	116
28	128	130	120	136	170	176	200	337	446	258	124	122
29	128	125	125	146	167	189	195	324	430	228	122	124
30	111	125	120	138	-	228	189	324	404	215	119	124
31	111	-	122	134	-	220	-	328	-	210	119	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						3,880	137	111	125		7,700	
November.....						3,848	137	116	128		7,630	
December.....						3,861	147	115	125		7,660	
Calendar year 1935 .....						62,150	455	71	170		123,300	
January.....						4,211	147	118	136		8,350	
February.....						4,567	184	131	157		9,060	
March.....						5,626	228	165	181		11,160	
April.....						8,649	488	172	288		17,180	
May.....						7,872	337	180	254		15,610	
June.....						10,348	480	228	345		20,520	
July.....						8,721	378	210	281		17,300	
August.....						5,043	220	119	163		10,000	
September.....						3,742	145	114	125		7,420	
Water year 1935-36 .....						70,365	488	111	192		139,600	

## OWENS LAKE BASIN

Owens River at Pleasant Valley, near Bishop, Calif.

Location.— Water-stage recorder, lat.  $37^{\circ}25'0''$ , long.  $118^{\circ}31'40''$ , in NW $\frac{1}{4}$  sec. 24, T. 6 S., R. 31 E., 1,000 feet above Owens River Canal intake, 2.2 miles below Rock Creek, and 8 miles northwest of Bishop. Altitude, about 4,350 feet.

Drainage area.— 596 square miles.

Records available.— March 1918 to September 1936.

Average discharge.— 18 years, 229 second-feet.

Extremes.— Maximum discharge during year, 780 second-feet June 26 (gage height, 5.30 feet); minimum, 116 second-feet Dec. 26 (result of regulation). 1918-36: Maximum discharge, 1,580 second-feet June 13, 1921 (gage height, 6.15 feet); minimum, 53 second-feet Aug. 25, 1931.

Remarks.— Diversions from tributaries and power plant regulation above station. Daily-discharge record furnished by city of Los Angeles.

Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	169	174	182	174	189	212	212	251	448	547	333	170
2	166	173	180	179	232	208	244	245	400	516	321	169
3	166	172	183	191	192	207	245	287	380	510	298	172
4	165	172	206	198	180	207	252	270	374	503	287	178
5	164	175	192	201	187	205	250	293	358	488	272	183
6	161	179	188	194	185	204	235	303	342	477	270	184
7	160	182	188	183	194	201	266	293	322	477	265	192
8	160	182	195	184	195	201	309	270	313	480	256	186
9	157	181	189	196	189	203	410	247	313	446	275	175
10	156	181	192	194	189	207	469	257	318	430	287	174
11	155	180	188	192	204	210	534	283	354	412	281	170
12	155	180	184	182	208	213	587	305	410	377	264	166
13	156	185	180	191	199	217	595	322	456	365	250	167
14	160	180	177	192	202	220	629	347	488	360	240	170
15	173	185	173	199	206	222	598	369	499	343	220	167
16	176	186	169	195	205	224	570	393	501	336	226	168
17	173	192	165	179	188	225	461	412	521	336	220	170
18	174	195	165	182	196	230	410	451	562	326	212	169
19	174	187	163	187	192	236	374	482	576	338	204	167
20	172	187	174	184	195	236	351	448	605	366	203	170
21	170	187	174	182	195	238	315	415	635	500	196	166
22	166	190	173	179	244	247	299	409	655	620	190	166
23	170	190	172	179	252	237	289	421	690	526	184	163
24	177	189	170	179	225	234	278	436	642	458	178	162
25	161	188	173	179	221	227	272	473	655	418	173	163
26	183	185	170	178	213	222	278	477	685	377	173	162
27	175	185	176	178	212	225	281	488	680	375	169	164
28	172	185	176	179	214	219	283	492	672	378	172	170
29	187	183	183	186	214	226	276	466	618	566	177	170
30	174	182	177	177	—	246	266	456	576	333	175	172
31	174	—	182	180	—	244	—	456	—	317	174	—
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....							5,221	187	155	168	10,560	
November.....							5,492	195	172	183	10,890	
December.....							5,559	206	163	179	11,030	
Calendar year 1935.....							85,604	660	123	235	169,800	
January.....							5,753	201	174	186	11,410	
February.....							5,919	252	180	204	11,740	
March.....							6,853	247	201	221	11,590	
April.....							10,838	629	212	361	21,500	
May.....							11,485	492	243	370	22,780	
June.....							15,046	690	313	502	29,850	
July.....							13,101	620	317	423	25,990	
August.....							7,143	333	169	230	14,170	
September.....							5,125	192	162	171	10,170	
Water year 1935-36 .....							97,537	690	155	266	193,500	

## Owens River near Big Pine, Calif.

Location.—Water-stage recorder, lat.  $37^{\circ}1'45''$ , long.  $118^{\circ}13'30''$ , in NE $\frac{1}{4}$  sec. 2, T. 11 S. R. 34 E., at Charlies Butte, 11 miles southeast of Big Pine. Altitude, about 3,650 feet.

Drainage area.—1,930 square miles.

Records available.—September 1906 to September 1936.

Average discharge.—30 years, 330 second-feet.

Extremes.—Maximum discharge during year, 579 second-feet June 3 (gage height, 4.05 feet); minimum, 9 second-feet Sept. 30.

1906-36: Maximum discharge, about 3,220 second-feet Jan. 26, 1914 (gage height, 11.2 feet); minimum, 4 second-feet June 6, 1930.

Remarks.—Diversions above station from river and tributaries. Storage in Tinemaha Reservoir (capacity 16,600 acre-feet). Intake of Los Angeles Aqueduct is 4 miles downstream from station. Daily-discharge record furnished by city of Los Angeles.

## Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	278	299	346	351	291	202	121	403	576	522	224	275
2	306	308	347	300	305	200	118	398	576	522	210	268
3	308	308	346	243	297	196	103	399	573	522	208	261
4	305	312	358	238	297	188	107	395	573	518	190	261
5	300	311	365	235	292	250	103	401	558	514	175	265
6	294	316	382	233	291	295	103	403	552	515	172	270
7	293	320	369	230	291	300	103	413	536	514	165	278
8	286	328	364	226	291	302	103	424	521	511	204	286
9	288	332	358	225	294	297	107	426	504	515	334	289
10	290	332	360	228	294	291	118	413	489	511	366	289
11	287	329	364	230	297	286	147	399	478	517	396	285
12	281	324	367	229	291	286	166	408	485	514	418	282
13	280	328	367	231	291	286	193	419	504	503	426	277
14	282	330	365	257	291	299	242	419	521	452	420	271
15	284	331	355	287	291	307	262	430	531	271	402	271
16	292	332	351	287	400	305	262	454	527	221	379	274
17	300	339	344	287	572	322	242	469	531	204	358	265
18	304	343	325	287	566	316	223	490	536	192	352	263
19	305	346	325	287	566	300	192	493	542	199	334	258
20	305	351	325	289	555	258	170	496	544	209	320	254
21	302	346	330	289	547	192	178	503	547	256	310	253
22	304	342	339	291	536	158	295	504	547	277	303	254
23	300	344	339	291	534	143	360	507	527	295	250	
24	302	347	328	287	481	140	363	504	422	373	288	247
25	302	353	334	287	373	133	362	507	427	362	281	244
26	304	346	330	287	260	121	366	513	420	321	271	242
27	308	347	325	287	234	114	370	525	420	305	264	240
28	314	346	337	287	208	108	386	539	424	268	260	165
29	311	346	349	287	206	103	395	555	422	250	263	74
30	303	346	353	289	-	100	405	555	465	234	274	45
31	308	-	355	289	-	104	-	564	-	236	277	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
<i>October.....</i>						9,231	314	278	298	18,310		
<i>November.....</i>						9,982	353	299	333	19,800		
<i>December.....</i>						10,800	382	323	348	21,420		
<i>Calendar year 1935.....</i>						123,267	524	114	338	244,500		
<i>January.....</i>						8,353	351	225	269	16,570		
<i>February.....</i>						10,442	572	206	360	20,710		
<i>March.....</i>						6,905	322	100	223	13,700		
<i>April.....</i>						6,666	405	103	222	13,220		
<i>May.....</i>						14,328	564	395	462	28,420		
<i>June.....</i>						15,253	576	420	509	30,260		
<i>July.....</i>						11,655	522	192	376	23,120		
<i>August.....</i>						9,139	426	165	295	18,130		
<i>September.....</i>						7,456	289	45	249	14,790		
<i>Water year 1935-36.....</i>						120,215	576	45	328	238,400		

## Rock Creek at Sherwin Hill, near Bishop, Calif.

Location.— Water-stage recorder, lat.  $37^{\circ}28'45''$ , long.  $118^{\circ}36'5''$ , in SW $\frac{1}{4}$  sec. 29, T. 5 S., R. 31 E., at Sherwin Hill, 3 miles above Pine Creek and 14 miles northwest of Bishop. Altitude, about 4,900 feet.

Drainage area.— 51.7 square miles.

Records available.— August 1922 to September 1936.

Average discharge.— 14 years, 20.5 second-feet.

Extremes.— Maximum discharge during year, 117 second-feet June 24 (gage height, 2.70 feet); minimum, 1.7 second-feet Dec. 13.

1922-36: Maximum discharge recorded, 162 second-feet June 17, 1927 (gage height, 3.04 feet, at former gage); minimum, that of Dec. 13, 1935.

Remarks.— Diversions at elevation about 7,300 feet for irrigation in Little Round Valley and discharge into Owens River at lower end of Long Valley. Daily-discharge record furnished by city of Los Angeles.

Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	11	9	10	12	11	14	11	33	56	64	31	16
2	11	10	10	12	S	13	12	35	51	60	29	16
3	10	6	11	12	11	13	12	38	49	59	29	16
4	10	7.5	12	13	10	13	13	37	49	56	32	17
5	10	9	8	11	12	12	12	40	45	55	31	17
6	9.5	12	9	11	12	12	12	39	42	55	29	16
7	9	11	11	6.5	14	12	13	37	41	54	28	16
8	9	11	13	13	12	12	14	36	40	52	30	15
9	8.5	11	9	11	11	12	15	36	36	50	33	15
10	8.5	10	13	12	13	12	15	37	33	51	35	14
11	8.5	10	12	12	13	12	16	40	36	47	36	13
12	8.5	11	6	9.5	12	17	43	44	41	33	13	
13	8.5	10	4.5	14	12	12	18	46	58	36	31	13
14	8.5	7	8	13	15	12	19	48	66	33	28	12
15	9.5	10	8.5	11	15	12	20	50	66	34	24	12
16	9	11	8	9	14	12	21	52	66	36	23	12
17	9	11	6	8.5	13	12	23	54	66	37	22	12
18	9.5	10	5.5	8	14	12	23	55	73	37	22	12
19	9.5	10	6	14	13	12	24	57	80	40	21	12
20	9.5	11	6	11	13	12	25	59	83	45	20	11
21	9	11	10	11	13	12	27	61	89	56	20	11
22	9	11	9	12	13	12	29	59	92	67	19	11
23	9	11	7	11	13	11	31	60	95	62	18	11
24	9.5	11	8	11	13	12	32	60	113	53	17	11
25	10	11	10	12	13	11	33	72	104	47	16	10
26	10	10	11	11	15	11	35	74	95	43	16	10
27	10	11	11	11	16	12	36	74	97	41	15	10
28	10	10	11	12	16	12	35	72	92	39	15	10
29	9	10	12	11	15	12	35	68	88	35	17	10
30	5.5	10	12	7.5	-	12	33	65	74	32	17	11
31	S	-	12	11	-	11	-	62	-	31	16	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						285.5	11	5.5	9.21		566	
November.....						303.5	12	6	10.1		602	
December.....						296.5	13	4.5	9.56		588	
Calendar year 1935.....						7,087.0	77	4.5	19.4		14,060	
January.....						340.5	14	6	11.0		675	
February.....						372.5	16	8	12.8		739	
March.....						373	14	11	12.0		740	
April.....						661	36	11	22.0		1,310	
May.....						1,599	74	33	51.6		3,170	
June.....						2,020	113	33	67.3		4,010	
July.....						1,447	67	31	46.7		2,870	
August.....						753	36	15	24.3		1,490	
September.....						385	17	10	12.8		764	
Water year 1935-36.....						8,836.5	113	4.5	24.1		17,520	

## Rock Creek near Round Valley, Calif.

Location.— Water-stage recorder, lat.  $37^{\circ}26'25''$ , long.  $118^{\circ}34'15''$ , in SE $\frac{1}{4}$  sec. 9, T. 6 S., R. 31 E., 0.1 mile above Pine Creek and 2 miles northwest of Round Valley. Altitude, about 4,450 feet.

Drainage area.— About 96 square miles.

Records available.— August 1903 to September 1923, April 1930 to September 1936.

Average discharge.— 26 years, 38.1 second-feet.

Extremes.— Maximum discharge during year, 107 second-feet June 24 (gage height, 2.86 feet); minimum, 11 second-feet Oct. 31.

1903-23, 1930-36: Maximum discharge recorded, 360 second-feet Jan. 25, 1914 (gage height, 5.0 feet, at former gage); minimum, 7.5 second-feet Sept. 16, 1933.

Remarks.— Water diverted for irrigation above station. Record of daily discharge furnished by city of Los Angeles.

## Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	19	17	20	17	27	20	16	36	56	69	34	20
2	19	17	21	22	42	19	17	37	54	61	31	20
3	17	17	21	24	18	20	16	39	54	61	31	20
4	17	18	27	24	18	19	16	32	54	60	32	17
5	17	18	20	21	20	20	16	32	51	60	31	16
6	17	18	21	21	19	20	16	35	50	55	31	18
7	17	18	21	18	21	20	15	34	49	51	30	21
8	17	18	23	19	20	20	14	31	48	52	31	20
9	15	18	19	23	19	18	14	32	46	50	32	14
10	15	18	23	24	19	18	14	34	43	50	34	13
11	15	18	22	23	22	18	16	36	44	47	37	14
12	15	18	21	16	24	18	16	37	48	43	38	13
13	15	18	15	24	20	16	16	42	54	41	36	13
14	15	18	16	23	20	16	16	51	59	38	34	14
15	16	18	17	21	20	16	14	56	60	35	29	14
16	16	18	14	21	20	16	16	58	58	34	29	15
17	16	19	13	15	17	17	17	58	61	39	29	16
18	17	18	14	14	16	18	18	61	68	39	29	17
19	17	18	14	20	16	18	20	65	74	41	27	17
20	16	18	17	19	15	18	23	63	77	44	26	16
21	15	17	18	20	16	17	24	60	83	63	21	16
22	15	18	19	19	17	18	26	56	89	74	19	16
23	16	17	17	20	17	18	29	57	94	66	19	16
24	18	17	16	20	18	17	31	61	104	57	17	16
25	18	17	18	20	16	16	34	69	103	50	16	15
26	18	17	20	20	19	17	37	74	93	43	13	13
27	18	18	20	20	20	19	38	73	93	43	17	14
28	18	19	20	20	20	17	37	70	91	41	19	14
29	17	20	20	20	19	18	38	63	86	37	22	15
30	14	20	19	16	-	18	36	61	78	32	22	16
31	15	-	21	21	-	18	-	61	-	31	20	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	510	19	14	16.5	1,010
November.....	538	20	17	17.9	1,070
December.....	597	27	13	18.9	1,160
Calendar year 1935.....	9,147	81	10	25.1	18,130
January.....	625	24	14	20.2	1,240
February.....	578	42	15	19.9	1,150
March.....	558	20	16	18.0	1,110
April.....	556	38	14	21.9	1,300
May.....	1,574	74	31	50.8	3,120
June.....	2,022	104	43	67.4	4,010
July.....	1,507	74	31	48.6	2,990
August.....	836	38	13	27.0	1,580
September.....	479	21	13	16.0	950
Water year 1935-36 .....	10,470	104	13	28.6	20,770

## OWENS LAKE BASIN

Pine Creek at division box, near Bishop, Calif.

Location.— Water-stage recorder, lat.  $37^{\circ}24'55''$ , long.  $118^{\circ}37'10''$ , in NW $\frac{1}{4}$  sec. 19, T. 6 S., R. 31 E., a quarter of a mile above division box and forks of creek, 4 miles west of Round Valley, and 13 miles northwest of Bishop. Altitude, about 5,250 feet.

Drainage area.— 37.9 square miles.

Records available.— October 1921 to September 1936.

Average discharge.— 15 years, 37.1 second-feet.

Extremes.— Maximum discharge during year, 350 second-feet July 21 (gage height, 3.58 feet); minimum, 13 second-feet Feb. 13.

1922-36: Maximum discharge, that of July 21, 1936; minimum, 10 second-feet Jan. 8, 1930, Jan. 21, 1935.

Remarks.— No diversions. Daily-discharge record furnished by city of Los Angeles.

Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	23	20	18	18	18	20	18	33	60	153	107	32
2	22	20	18	18	17	20	18	41	58	151	92	32
3	22	20	18	18	16	20	18	51	58	147	80	32
4	21	20	19	18	16	20	18	61	51	149	74	32
5	21	20	18	18	18	20	18	68	60	142	70	32
6	21	20	18	18	18	20	18	62	74	136	66	30
7	21	20	18	17	18	20	18	52	65	145	62	29
8	21	20	18	17	18	20	19	47	65	132	65	28
9	21	20	18	17	18	20	21	51	76	117	73	26
10	21	20	18	17	18	20	23	68	114	109	70	26
11	21	20	18	17	18	20	26	78	141	107	65	26
12	21	20	18	17	18	20	28	86	176	107	61	26
13	21	20	17	17	19	20	30	97	170	111	60	26
14	21	20	17	18	19	20	33	105	168	113	58	25
15	21	20	17	18	19	20	38	93	158	111	55	25
16	21	19	17	18	19	20	42	95	173	113	52	24
17	21	19	17	18	19	20	44	101	183	113	50	24
18	21	19	18	18	19	20	46	112	191	113	47	23
19	21	18	18	18	19	20	47	101	193	117	45	22
20	21	18	18	18	19	20	47	73	186	151	44	22
21	21	18	18	18	19	20	48	71	204	235	43	21
22	21	18	18	18	18	20	49	87	214	205	41	22
23	21	18	18	18	18	20	51	110	247	151	39	21
24	21	18	18	18	18	20	51	122	215	127	38	21
25	21	18	18	18	18	22	52	136	187	115	36	21
26	21	18	18	18	21	20	54	126	181	105	34	20
27	20	18	18	18	20	19	54	115	181	105	34	20
28	20	18	18	18	20	19	51	110	173	99	33	20
29	19	18	18	17	20	19	58	104	158	103	33	20
30	19	18	18	17	-	19	35	90	154	94	33	20
31	19	-	18	17	-	19	-	74	-	103	33	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
					in acre-feet
October.....	647	23	19	20.9	1,280
November.....	573	20	18	19.1	1,140
December.....	554	19	17	17.9	1,100
Calendar year 1935.....	14,394	182	10	39.4	28,550
January.....	548	18	17	17.7	1,090
February.....	558	22	16	18.6	1,070
March.....	615	20	19	19.8	1,220
April.....	1,073	58	18	35.8	2,130
May.....	2,620	136	33	84.5	5,200
June.....	4,354	247	51	144	8,600
July.....	3,979	235	94	128	7,890
August.....	1,693	107	33	54.6	3,360
September.....	748	32	20	24.9	1,480
Water year 1935-36.....	17,922	247	16	49.0	35,560

## Pine Creek near Round Valley, Calif.

Location.— Water-stage recorder, lat.  $37^{\circ}26'10''$ , long.  $118^{\circ}34'10''$ , in SE $\frac{1}{4}$  sec. 9, T. 6 S., R. 31 E., 600 feet above junction with Rock Creek and 2 miles northwest of Round Valley. Altitude, about 4,450 feet.

Drainage area.— About 58 square miles.

Records available.— August 1903 to September 1923, April 1930 to September 1936.

Average discharge.— 26 years, 21.3 second-feet.

Extremes.— Maximum discharge during year, 255 second-feet July 22 (gage height, 3.73 feet); minimum 0.5 second-foot Oct. 1.

1903-23, 1930-36: Maximum mean daily discharge (estimated), 370 second-feet June 22, 1911; minimum, 0.1 second-foot July 30, Aug. 13, 1920, May 23, 1920, many days in 1931, Aug. 25, 1934.

Remarks.— Water diverted for irrigation above station. Daily-discharge record furnished by city of Los Angeles.

## Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0.8	3.8	4.6	3.8	8.5	4.2	1.4	6.5	28	88	52	4.1
2	1.4	4.6	4.6	4.6	19	4.2	1.4	5.5	26	86	37	4.0
3	2.8	4.7	4.7	5	5	4.0	1.4	8.5	27	90	33	3.8
4	3.3	4.6	13	8	4.0	3.8	1.4	12	23	94	30	3.7
5	3.5	4.6	6.5	5.5	4.0	3.7	1.4	19	22	89	33	3.6
6	3.2	5	5.5	4.6	3.7	3.7	1.4	17	34	81	32	3.5
7	3.2	5.5	5	3.8	3.8	3.5	1.3	15	26	86	31	3.3
8	3.7	5.5	5	3.8	3.7	3.3	1.3	9.5	24	85	31	3.3
9	3.3	4.7	4.7	4.7	3.7	5.0	1.3	5	50	63	36	3.5
10	2.8	4.4	4.6	5.5	3.7	2.7	1.3	11	46	50	34	3.7
11	2.7	4.6	4.9	4.6	9.5	2.7	1.3	17	68	43	26	3.3
12	2.5	4.9	5.5	3.8	9.5	2.7	1.2	22	88	44	22	2.5
13	2.7	5.5	4.7	3.8	6.5	2.7	1.2	31	94	45	19	3.5
14	2.4	4.9	4.6	3.8	5.5	2.7	1.2	36	88	46	17	4.0
15	2.7	5	4.4	3.5	5.5	2.7	1.2	32	81	46	14	4.0
16	3.0	5.5	4.0	3.3	4.9	2.7	2.2	34	87	45	12	4.4
17	3.7	5.3	3.8	3.0	3.3	2.7	3.8	41	124	42	10	4.6
18	4.6	5.5	3.7	3.0	3.7	2.7	5	52	145	40	6.5	4.0
19	4.6	5	3.8	3.0	3.5	2.7	5.5	56	154	44	6	3.7
20	4.4	5	4.2	3.2	3.7	2.5	4.4	45	152	76	5.5	3.8
21	4.4	5.5	4.4	3.0	4.0	2.2	3.5	38	153	199	5.5	3.7
22	4.4	5.5	4.2	3.2	13	1.9	3.5	39	161	196	5.5	3.7
23	4.6	5.5	4.0	3.2	19	1.8	3.0	48	178	109	5	3.3
24	4.7	5	3.8	3.0	9.5	1.8	2.7	54	183	82	5	2.2
25	4.7	5	3.7	3.0	6.5	1.8	2.7	57	140	66	4.9	1.5
26	4.6	4.7	3.8	3.0	5.5	1.8	2.8	54	125	50	4.8	1.4
27	4.6	4.6	4.4	3.7	4.9	1.8	6.5	52	125	65	4.7	1.5
28	4.4	4.6	4.0	4.0	4.7	1.9	13	50	130	70	4.6	1.9
29	3.3	4.6	4.2	3.7	4.0	2.1	10	44	95	70	4.4	1.3
30	3.5	4.6	4.6	3.3	—	1.8	8.5	38	86	44	4.3	1.4
31	3.7	—	4.2	3.8	—	1.7	—	34	—	42	4.2	—

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in
					acre-feet
October.....	108.2	4.7	0.8	3.49	215
November.....	148.4	5.5	3.8	4.95	294
December.....	147.1	13	3.7	4.75	292
Calendar year 1935 .....	5,268.0	123	.5	14.4	10,450
January.....	121.2	8	3.0	3.91	240
February.....	185.9	19	3.3	6.41	369
March.....	83.5	4.2	1.7	2.69	166
April.....	96.8	13	1.2	-3.23	192
May.....	983.0	57	5	31.7	1,950
June.....	2,743	183	22	91.4	5,440
July.....	2,276	199	40	73.4	4,510
August.....	539.9	52	4.2	17.4	1,070
September.....	96.2	4.6	1.3	3.21	191
Water year 1935-36 .....	7,529.1	199	.8	20.6	14,930

## Mono Lake near Mono Lake, Calif.

Location.- Staff gage, lat.  $38^{\circ}0'$ , long.  $119^{\circ}8'$ , in NE $\frac{1}{4}$  sec. 31, T. 2 N., R. 26 E., about a mile south of Mono Lake post office.

Records available.- June 1912 to September 1936.

Extremes.- 1912-36: Maximum stage, 37.4 feet July 18, 1919; minimum, 23.8 feet Nov. 18, 1935.

Remarks.- The following table shows the stage above datum 6,390.66 feet above mean sea level (general adjustment of 1929). See Water-Supply Paper 765 for summary of previous Mono Lake records.

Gage height, in feet, water year 1935-36					
Date	U. S. Forest Service	City of Los Angeles	Date	U. S. Forest Service	City of Los Angeles
1935			1936		
Oct. 3	-	24.2	Apr. 2	-	24.8
9	-	24.1	9	-	24.8
17	-	24.0	14	-	24.8
23	24.2	-	20	24.8	-
24	-	24.0	22	-	24.8
Nov. 18	-	23.8	30	-	24.8
19	24.1	-	May 8	-	24.8
28	-	25.9	15	-	24.8
Dec. 4	-	25.9	17	24.8	-
10	-	24.0	21	-	24.8
18	-	24.0	25	-	24.8
20	-	24.0	June 4	-	24.7
26	-	24.0	9	-	24.7
27	24.0	-	17	-	24.7
30	-	24.1	24	-	24.8
			28	24.8	-
1936			30	-	24.8
Jan. 2	-	24.1	July 10	-	24.8
7	-	24.0	17	-	24.8
18	-	24.2	23	-	24.8
22	-	24.1	24	24.8	-
30	-	24.2	29	-	24.8
Feb. 6	-	24.4	Aug. 4	-	24.8
10	-	24.3	12	-	24.8
17	-	24.5	14	24.6	-
27	-	24.7	18	-	24.7
Mar. 4	-	24.7	25	-	24.6
14	-	24.7	31	-	24.6
18	-	24.8	Sept. 8	-	24.5
26	-	24.8	15	24.4	24.4
			23	-	24.4

## WALKER LAKE BASIN

## Walker Lake near Hawthorne, Nev.

Location.- Elevations determined by spirit leveling, lat.  $38^{\circ}35'$ , long.  $118^{\circ}42'$ , in NW $\frac{1}{4}$  sec. 1, T. 8 N., R. 29 E., at bathing beach of United States naval ammunition depot, 6 miles northwest of Hawthorne.

Records available.- August 1928 to September 1936. Occasional readings prior to August 1928.

Extremes.- 1928-36: Maximum elevation observed, 4,051.8 feet Mar. 13, 1928 (U. S. Indian Service); minimum, 4,023.0 feet Sept. 4, 1936. On Sept. 27, 1908, lake elevation was 4,078.0 feet, determined by U. S. Coast and Geodetic Survey. Elevations based on benchmarks along precise level lines of Coast and Geodetic Survey (general adjustment of 1912).

Remarks.- Records furnished by U. S. Navy Department.

## Elevations, in feet, above mean sea level, water year 1935-36

Oct. 10	4,025.7	Apr. 14	4,025.3
Nov. 12	4,025.7	May 7	4,025.2
Dec. 12	4,025.4	June 9	4,024.1
Jan. 7	4,025.3	July 9	4,024.0
Feb. 7	4,025.2	Aug. 5	4,023.7
Mar. 13	4,025.2	Sept. 4	4,023.0

## Bridgeport Reservoir near Bridgeport, Calif.

Location.— Elevation determined at Bridgeport Dam, lat.  $38^{\circ}19'30''$ , long.  $119^{\circ}12'50''$ , in  
SE $\frac{1}{4}$  sec. 34, T. 6 N., R. 25 E., 4½ miles north of Bridgeport.

Records available.— October 1931 to September 1938.

Remarks.— Capacity of reservoir, 42,500 acre-feet. Gage-height record and capacity  
table furnished by Walker River Irrigation District.

Contents, in acre-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	16,660	17,560	20,920	24,140	28,930	33,860	35,700	36,630	31,570	42,610	37,590	26,010
2	16,580	17,580	21,010	24,240	29,040	34,110	35,700	36,230	31,620	42,610	37,180	27,550
3	16,580	17,750	21,110	24,340	29,160	34,240	35,440	35,960	32,080	42,610	36,630	27,200
4	16,500	17,540	21,210	24,560	29,280	34,380	35,440	35,570	32,330	42,460	36,100	26,860
5	16,420	17,920	21,300	24,770	29,400	34,640	35,440	35,170	32,590	42,460	35,700	26,640
6	16,420	18,000	21,400	24,880	29,400	34,900	35,440	34,770	32,840	42,170	35,440	26,640
7	16,420	18,510	21,500	24,990	29,640	35,170	34,510	33,090	41,380	35,170	26,420	
8	16,340	18,180	21,600	25,100	29,880	35,170	34,900	34,240	33,350	42,020	34,510	25,960
9	16,340	18,260	21,700	25,210	30,120	35,300	34,900	33,980	33,600	42,170	34,110	25,650
10	16,340	18,440	21,800	25,430	30,240	35,440	34,900	33,600	33,730	43,070	33,730	25,650
11	16,340	18,520	21,900	25,540	30,360	35,570	34,900	33,220	33,600	42,910	33,600	25,430
12	16,340	18,610	21,990	25,760	30,610	35,570	35,040	32,840	33,730	42,760	33,600	25,100
13	16,340	18,780	22,090	25,990	30,780	35,700	35,170	32,840	33,730	42,460	33,980	24,880
14	16,420	18,870	22,190	26,200	30,970	35,830	35,440	33,090	33,560	42,320	34,110	24,660
15	16,420	18,960	22,280	26,310	31,090	35,830	35,700	32,840	34,110	42,170	34,110	24,660
16	16,500	19,060	22,280	26,420	31,330	35,960	35,830	32,840	34,380	42,170	35,860	24,560
17	16,500	19,150	22,380	26,530	31,450	36,100	36,100	32,840	34,640	42,170	35,600	24,450
18	16,500	19,330	22,380	26,750	31,570	36,100	36,360	32,590	34,900	42,020	33,220	24,240
19	16,580	19,520	22,460	26,980	31,570	36,100	36,530	32,330	33,500	41,580	33,990	24,240
20	16,740	19,610	22,580	27,200	31,700	36,230	37,040	32,080	35,700	41,140	32,940	24,140
21	16,820	19,700	22,900	27,440	31,620	36,230	37,320	31,950	35,960	40,710	32,720	24,140
22	16,900	19,880	23,000	27,550	31,950	36,230	37,460	31,820	36,230	40,270	32,460	24,040
23	16,900	19,980	23,000	27,780	32,080	36,500	37,590	31,700	36,760	39,350	32,350	23,930
24	16,980	20,150	23,100	27,900	32,330	36,500	37,590	31,450	37,320	39,540	32,080	23,830
25	17,060	20,250	23,200	28,010	32,590	36,500	37,730	31,090	38,010	39,260	31,450	23,620
26	17,060	20,340	23,300	28,120	32,840	36,230	37,870	30,970	38,980	39,260	31,090	23,620
27	17,140	20,450	23,410	28,360	33,090	35,960	38,010	30,970	40,120	39,120	30,730	23,410
28	17,220	20,620	23,620	28,470	33,350	35,700	38,150	30,850	40,710	38,430	30,120	23,300
29	17,320	20,720	23,720	28,700	33,600	35,700	38,010	31,090	41,440	38,430	29,760	23,200
30	17,400	20,820	23,840	28,820	-	35,700	37,040	31,210	42,610	38,010	29,280	23,200
31	17,490	-	24,040	28,820	-	35,960	-	31,450	-	37,870	28,930	-

## East Walker River near Bridgeport, Calif.

Location. - Staff gage, lat.  $38^{\circ}19'40''$ , long.  $119^{\circ}12'50''$ , in SW $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 34, T. 6 N., R. 25 E., 1,500 feet downstream from Bridgeport Reservoir, 5 miles north of Bridgeport, and 10 miles above Sweetwater Creek.

Drainage area. - 362 square miles.

Records available. - October 1921 to September 1936. July 1911 to September 1914 at site 1½ miles upstream.

Average discharge. - 13 years (1922-24, 1925-36), 97.5 second-feet.

Extremes. - Maximum discharge observed during year, 510 second-feet July 1 from rating curve extended above 300 second-feet; minimum, 6 second-feet Nov. 3 to Jan. 31.

1921-36: Maximum discharge, 1,050 second-feet (estimated) June 28-30, 1922; minimum, 2 second-feet several times, when reservoir gates were closed.

Remarks. - Records good. Staff gage read once daily. Considerable areas of meadow and pasture irrigated near Bridgeport. Flow regulated by Bridgeport Reservoir; capacity, 42,500 acre-feet. Gage height record furnished by Walker River Irrigation District.

Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	e1	20	6	6	7	8	241	277	262	469	330	317
2	81	12	6	6	7	8	241	277	246	456	338	317
3	81	6	6	6	7	8	241	277	228	456	338	317
4	81	6	6	6	7	8	241	277	228	456	338	302
5	81	6	6	6	7	8	241	277	212	368	320	246
6	81	6	6	6	7	25	241	277	197	272	282	210
7	81	6	6	6	7	52	241	277	197	250	282	210
8	65	6	6	6	7	52	206	274	197	246	282	210
9	48	6	6	6	7	52	175	272	197	246	282	189
10	40	6	6	6	7	52	169	272	197	402	262	169
11	19	6	6	6	7	63	156	272	197	491	279	169
12	8	6	6	6	7	74	148	248	197	491	228	169
13	8	6	6	6	7	86	143	225	197	544	193	169
14	8	6	6	6	7	107	137	269	197	265	193	136
15	8	6	6	6	7	110	137	269	197	244	193	115
16	e	6	6	6	7	124	137	289	197	244	193	115
17	16	6	6	6	7	139	137	289	200	244	193	115
18	25	6	6	6	7	156	158	307	200	286	193	92
19	23	6	6	6	7	187	177	309	217	304	193	70
20	21	6	6	6	7	208	177	296	279	304	193	70
21	21	6	6	6	7	230	177	296	296	317	191	87
22	21	6	6	6	7	239	177	296	296	341	191	107
23	21	6	6	6	7	239	195	296	296	341	191	107
24	21	6	6	6	7	239	206	296	296	341	212	107
25	21	6	6	6	7	239	195	296	267	341	234	107
26	20	6	6	6	7	239	195	296	244	341	234	107
27	19	6	6	6	7	239	195	296	226	341	244	107
28	19	6	6	6	7	239	195	296	226	341	267	92
29	19	6	6	6	7	239	260	276	330	341	286	64
30	19	6	6	6	-	239	274	260	476	341	320	64
31	19	-	6	6	-	239	-	260	-	341	320	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in
					acre-feet
October.....	1,084	81	5	35.0	2,150
November.....	200	20	6	6.7	397
December.....	186	6	6	6.0	369
Calendar year 1935.....	37,799	287	6	104	74,970
January.....	186	6	6	6.0	369
February.....	203	7	7	7.0	403
March.....	4,149	239	8	134	8,230
April.....	5,803	274	137	193	11,510
May.....	8,715	309	226	281	17,290
June.....	7,195	476	197	240	14,270
July.....	10,566	491	244	341	20,960
August.....	7,823	338	191	252	15,820
September.....	4,666	317	64	155	9,240
Water year 1935-36.....	50,765	491	6	139	100,700

## West Walker River near Coleville, Calif.

Location. - Water-stage recorder, lat.  $38^{\circ}30'50''$ , long.  $119^{\circ}27'15''$ , in NE $\frac{1}{4}$  sec. 28, T. 8 N., R. 23 E., immediately below Rock Creek (Ross Canyon), at head of Antelope Valley, 5 miles southeast of Coleville, and 10 miles below East Fork.

Drainage area. - 245 square miles.

Records available. - March 1909 to August 1910, June 1915 to September 1936. October 1902 to July 1908 at site half a mile upstream.

Average discharge. - 26 years (1902-7, 1915-36), 277 second-feet.

Extremes. - Maximum discharge recorded during year, 1,540 second-feet June 23 (gage height, 4.75 feet); minimum recorded, 15 second-feet Dec. 13 (gage height, 1.32 feet).

1915-36: Maximum discharge, 2,710 second-feet June 12, 1921 (gage height, 5.74 feet), from rating curve extended above 1,700 second-feet; minimum, 5 second-feet Dec. 3, 1924, Aug. 27, 1931.

Remarks. - Records fair. Discharge Oct. 18-21, 31, Nov. 1-4, 24-25, Dec. 14-23, 25-30, May 17 computed on basis of weather records and discharge records of East Fork of Carson River near Gardnerville, Nev. Discharge May 1-16, 18-30, determined from daily gage readings. Station is above diversions except for a few small ranch ditches. Very slight regulation from storage in Foor Lake Reservoir, 17 miles upstream, capacity unknown.

Rating table, water year 1935-36 (gage height, in feet, and discharge, in second-feet)

1.4	19	2.0	85	2.8	313	4.0	950
1.5	26	2.2	124	3.0	400	4.5	1,350
1.6	33	2.4	175	3.3	550	5.0	1,780
1.8	55	2.6	238	3.6	710	5.5	2,510

Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	51	60	41	48	56	65	116	440	565	872	208	62
2	58	70	43	54	43	63	120	490	515	884	208	71
3	54	65	47	63	44	66	122	630	505	878	199	72
4	51	60	48	59	77	68	111	872	500	878	187	79
5	50	65	39	50	59	71	116	1,040	540	818	175	83
6	49	66	44	48	59	71	107	800	656	746	170	80
7	48	68	47	45	53	75	124	590	806	776	159	72
8	48	65	47	47	47	82	159	560	630	860	151	66
9	48	66	38	47	45	92	184	635	645	625	146	61
10	44	58	48	53	49	105	208	776	788	615	172	58
11	43	61	47	65	59	109	245	918	1,060	525	205	55
12	44	53	47	48	59	120	294	876	1,200	490	175	55
13	44	47	27	44	46	136	347	1,010	1,190	555	148	56
14	45	42	56	61	58	138	420	1,170	1,150	535	134	59
15	49	55	40	74	59	146	506	1,100	1,060	505	114	62
16	50	51	40	56	56	151	615	1,160	1,080	485	101	61
17	50	53	40	51	51	167	680	1,180	1,110	425	98	56
18	50	44	40	53	59	184	728	1,140	1,170	396	94	55
19	50	43	40	58	58	187	656	1,140	1,190	415	87	53
20	50	48	42	51	55	193	686	806	1,200	430	82	50
21	50	49	45	51	74	205	686	740	1,160	490	72	49
22	51	51	40	51	124	205	716	800	1,200	410	69	49
23	49	48	42	51	72	170	758	995	1,270	373	66	47
24	50	48	44	48	58	159	665	1,160	1,260	551	62	45
25	54	49	45	50	61	143	640	1,230	1,250	309	61	45
26	51	49	45	48	69	134	650	1,250	1,180	267	59	44
27	49	47	46	50	71	134	640	988	1,150	249	53	44
28	48	48	46	49	74	126	560	1,110	1,080	235	54	45
29	47	47	47	49	68	134	460	812	918	228	56	45
30	50	44	47	43	-	131	373	764	842	222	61	47
31	50	-	47	53	-	124	-	640	-	212	56	-

Month		Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....		1,523	55	43	49.1	3,020
November.....		1,620	70	42	54.0	3,210
December.....		1,334	48	27	43.0	2,650
Calendar year 1935.....		98,163	1,590	27	269	194,700
January.....		1,618	74	43	52.2	3,210
February.....		1,762	124	43	60.8	3,490
March.....		3,954	205	53	128	7,840
April.....		12,717	758	107	424	25,220
May.....		27,784	1,250	440	896	55,110
June.....		28,850	1,270	500	962	57,220
July.....		15,959	884	212	515	31,650
August.....		3,682	208	53	119	7,300
September.....		1,726	83	44	57.5	3,420
Water year 1935-36.....		102,529	1,270	27	280	203,300

## Topaz Reservoir near Topaz, Calif.

Location.— Elevations obtained near outlet works of Topaz Reservoir, lat.  $38^{\circ}41'$ , long.  $119^{\circ}31'$ , in sec. 28, T. 10 N., R. 22 E., 6 miles north of Topaz.

Records available.— October 1931 to September 1936.

Remarks.— Topaz Reservoir, formerly Alkali Lake, was formed by diverting water through a feeder canal from West Walker River, and constructing outlet works through a low saddle in rim of lake. Contents shown represent available storage only. The usable capacity is about 45,000 acre-feet. Gage-height record and capacity table furnished by Walker River Irrigation District.

Contents, in acre-feet, water year October 1935 to September 1936

Day	Oot.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	14,050	13,810	-	-	-	-	35,550	-	38,160	44,180	35,640	22,760
2	-	-	-	-	-	-	-	37,440	37,980	44,180	34,920	22,420
3	-	-	18,000	21,660	-	32,940	-	-	37,820	44,180	34,380	22,080
4	13,560	-	-	-	26,500	-	35,550	36,900	37,280	44,180	34,020	21,920
5	-	13,970	-	-	-	-	-	37,080	36,900	44,180	33,480	21,740
6	-	-	18,520	-	-	33,480	-	37,440	36,540	44,180	32,490	21,740
7	-	14,380	-	-	26,930	35,640	37,820	36,180	44,360	32,050	21,580	-
8	13,320	-	-	-	-	-	-	37,800	35,820	44,360	31,520	21,400
9	-	-	-	-	-	35,640	37,980	35,460	44,730	31,000	21,240	-
10	-	-	19,020	22,510	-	-	-	37,800	35,100	44,920	30,650	21,060
11	13,400	-	-	-	27,440	-	35,640	37,800	34,920	44,920	30,480	20,900
12	-	14,620	-	-	-	-	-	37,980	35,100	44,540	30,480	20,720
13	-	-	19,540	-	-	34,740	-	38,160	35,280	44,180	30,300	20,560
14	-	-	-	23,530	28,550	35,620	-	-	38,520	35,640	43,990	30,300
15	13,160	14,950	-	-	-	-	-	38,880	35,820	43,800	30,120	20,380
16	-	-	-	-	-	35,820	39,420	36,270	43,620	29,780	20,220	-
17	-	-	19,960	23,870	-	34,920	-	-	37,080	43,440	29,600	19,880
18	13,400	-	-	-	29,340	-	-	40,320	37,800	43,440	29,420	19,700
19	-	15,940	-	-	-	-	-	40,680	38,880	43,060	29,080	19,540
20	-	-	20,130	-	-	35,010	36,360	40,680	39,600	42,880	27,180	19,540
21	-	-	-	-	29,950	-	37,080	40,500	40,680	42,510	27,020	19,360
22	13,560	16,600	-	24,380	-	-	-	40,140	41,770	41,960	26,840	19,200
23	-	-	-	-	-	-	-	37,800	39,960	42,320	41,220	26,680
24	-	-	20,470	24,720	-	35,010	37,980	39,780	43,060	40,680	26,340	19,020
25	13,720	-	-	-	31,440	-	37,980	39,600	43,990	39,960	26,160	18,860
26	-	17,090	-	-	-	-	-	39,600	44,180	39,420	25,820	18,860
27	-	-	-	-	-	35,370	-	39,420	44,180	38,700	25,140	18,680
28	-	-	-	25,320	32,140	-	38,340	39,420	44,180	37,980	24,460	18,680
29	13,810	17,500	-	-	-	-	-	39,240	44,180	37,620	23,960	18,680
30	-	-	-	-	-	-	38,160	39,060	44,180	37,080	23,440	18,680
31	13,810	-	21,240	25,660	-	35,460	-	38,520	-	36,360	23,100	-

## CARSON RIVER BASIN

East Fork of Carson River near Gardnerville, Nev.

Location.- Staff gage, lat. 38°52'25", long. 119°41'35", in sec. 25, T. 12 N., R. 20 E., 300 feet below Douglas Power Co.'s dam, 1,000 feet above highway bridge, 0.5 mile southwest of Rodenbah ranch, and 5 miles southeast of Gardnerville.

Drainage area.- 381 square miles.

Records available.- April 1890 to December 1893, October 1900 to December 1906, March 1908 to December 1910, June to October 1917, December 1924 to September 1929, October 1935 to September 1936.

Extremes.- Maximum discharge observed during year, 2,290 second-feet Apr. 11 (gage height, 3.05 feet), from rating curve extended above 1,400 second-feet; minimum observed, 23 second-feet Dec. 11.

1890-93, 1900-1906, 1908-10, 1917, 1924-29, 1935-36: Maximum discharge, 5,540 second-feet (estimated) Dec. 25, 1892; minimum, 8 second-feet Dec. 4-10, 19-23, 1904.

Remarks.- Records fair. Staff gage read once daily. Discharge estimated Feb. 22. Station is above all diversions in Carson Valley except Rodenbah pump ditch.

Rating table, water year 1935-36 (gage height, in feet, and discharge, in second-feet)

0.1	10	0.8	192	2.0	1,140
.2	28	1.0	291	2.5	1,460
.3	47	1.2	420	2.6	1,790
.4	68	1.4	576	3.0	2,230
.5	92	1.6	752	3.5	2,830
.6	120	1.8	940		

Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	53	70	60	49	82	184	197	752	734	576	157	92
2	66	80	55	66	90	201	198	983	752	536	150	95
3	68	66	60	78	60	215	206	1,140	845	511	146	95
4	58	62	60	80	60	233	192	1,240	680	495	146	98
5	58	66	60	75	70	220	197	1,300	780	495	136	109
6	58	75	66	60	70	229	172	1,140	845	480	127	96
7	58	68	60	62	78	224	264	940	1,350	458	117	92
8	58	70	60	60	58	238	309	1,040	960	458	106	87
9	58	70	60	80	58	287	348	1,090	940	420	120	80
10	58	68	60	80	58	322	1,200	1,140	890	420	127	82
11	64	64	62	172	201	303	2,290	1,200	1,040	406	150	87
12	62	62	66	95	206	322	536	1,140	1,140	368	120	90
13	60	60	47	92	135	334	653	1,350	1,140	328	109	92
14	60	60	25	98	135	345	707	1,570	1,120	305	100	95
15	75	66	41	172	135	303	771	1,520	1,040	280	103	85
16	68	64	62	123	135	346	892	1,350	960	264	106	78
17	66	70	68	117	98	379	1,020	1,350	1,040	249	103	75
18	66	62	70	109	120	393	1,060	1,240	1,060	243	100	75
19	66	64	68	106	103	420	1,160	1,140	1,020	238	95	73
20	66	62	38	100	98	435	1,230	1,040	1,060	238	90	70
21	66	62	41	70	393	458	1,470	960	1,120	379	82	68
22	66	70	51	73	1,100	458	1,170	940	1,190	243	73	64
23	60	68	68	70	503	352	1,160	1,090	1,060	224	70	58
24	58	60	68	80	254	303	1,270	1,240	1,000	201	70	58
25	64	60	66	80	220	275	1,200	1,260	960	184	75	55
26	70	58	68	73	172	243	1,070	1,220	921	161	92	55
27	66	58	66	70	172	220	1,030	1,190	808	153	90	55
28	66	66	38	73	172	233	970	1,090	752	150	85	58
29	64	58	80	75	176	249	940	990	698	146	82	58
30	64	55	68	80	-	238	752	902	593	176	90	55
31	58	-	60	70	-	215	-	798	-	161	95	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	1,943	73	53	62.7	3,850
November.....	1,944	80	55	64.8	3,860
December.....	1,824	80	23	58.8	3,620
Calendar year .....					
January.....	2,700	172	49	87.1	5,360
February.....	5,245	1,100	58	181	10,400
March.....	9,198	458	184	296	18,220
April.....	24,622	2,290	172	821	48,840
May.....	35,245	1,570	752	1,137	69,910
June.....	28,598	1,350	593	953	56,720
July.....	9,942	576	146	321	19,720
August.....	3,312	157	70	107	6,570
September.....	2,332	109	55	77.7	4,630
Water year 1935-36.....	126,995	2,290	23	347	251,700

## CARSON RIVER BASIN

Carson River near Fort Churchill, Nev.

Location. - Water-stage recorder, lat.  $39^{\circ}17'$ , long.  $119^{\circ}18'$ , in SE $\frac{1}{4}$  sec. 32, T. 17 N., R. 24 E., 2 miles west of Fort Churchill and 6 miles east of Clifton.

Drainage area. - 1,450 square miles.

Records available. - January 1934 to September 1936. April 1911 to December 1933 at site 8 miles upstream; records practically comparable.

Average discharge. - 25 years (1911-36), 346 second-feet.

Extremes. - Maximum daily discharge during year, 2,040 second-feet Feb. 24; no flow Oct. 1-28, Aug. 1 to Sept. 30.

1911-36: Maximum discharge, 6,150 second-feet Jan. 26, 1914 (gage height, 11.5 feet, former site and datum); no flow during periods in nearly every year since 1923.

Remarks. - Numerous diversions for irrigation above, including diversions for irrigation of 720 acres between present site and the site used prior to Jan. 1, 1934. Practically entire flow is diverted during late irrigation season. Records of daily discharge furnished by Truckee-Carson Irrigation District.

## Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	0	67	104	161	146	527	320	928	936	502		
2	0	75	104	146	159	478	317	850	905	411		
3	0	94	104	140	180	454	309	889	842	368		
4	0	109	111	144	176	448	298	1,190	951	331		
5	0	117	115	152	154	454	291	1,430	1,080	320		
6	0	117	115	152	159	441	283	1,640	1,030	291		
7	0	102	117	148	154	429	280	1,690	1,010	265		
8	0	100	115	142	157	417	276	1,320	1,260	224		
9	0	113	115	144	159	411	269	1,100	1,390	206		
10	0	120	117	152	157	429	269	1,090	1,170	176		
11	0	127	122	191	159	387	287	1,180	1,030	161		
12	0	131	122	235	239	387	380	1,330	990	152		
13	0	124	129	294	811	562	533	1,300	1,040	157		
14	0	120	133	257	889	387	655	1,330	1,070	150		
15	0	113	131	250	725	387	733	1,580	1,070	131		
16	0	111	120	317	582	368	811	1,690	936	108		
17	0	107	109	298	478	374	936	1,790	827	79		
18	0	113	98	276	448	387	1,040	1,690	811	52		
19	0	120	90	232	350	435	1,180	1,610	858	42		
20	0	120	84	202	320	423	1,270	1,560	889	41		
21	0	113	88	195	294	423	1,320	1,300	928	38		
22	0	109	96	180	749	429	1,390	1,100	912	31		
23	0	111	104	163	1,510	435	1,390	1,080	912	19		
24	0	117	111	159	2,040	454	1,450	1,070	928	18		
25	0	120	120	157	1,200	435	1,460	1,070	1,030	18		
26	0	115	129	157	756	417	1,360	1,200	1,100	12		
27	31	113	124	157	702	399	1,330	1,260	987	7		
28	51	111	127	157	671	368	1,340	1,200	850	4		
29	64	104	136	157	594	350	1,270	1,280	749	3		
30	64	104	143	154	-	335	1,130	1,200	717	3		
31	64	-	170	152	-	328	-	1,010	-	3		
Month						Second-foot-days	Maximum	Minimum	Mean	Run-Off in acre-feet		
						274	64	0	8.8	543		
						3,317	131	67	111	6,580		
						3,603	170	84	116	7,150		
Calendar year 1935.....						109,015	1,900	0	299	216,200		
						5,821	317	140	188	11,550		
						15,118	2,040	146	521	29,990		
						12,768	527	328	412	29,510		
						24,177	1,460	269	806	47,980		
						39,937	1,790	850	1,288	79,210		
						29,188	1,390	717	973	57,890		
						4,323	502	3	139	5,670		
						0	0	0	0	0		
						0	0	0	0	0		
Water year .....						138,516	2,040	0	378	274,700		

## HUMBOLDT RIVER BASIN

71

### Humboldt River at Palisade, Nev.

Location.—Chain gage, lat.  $40^{\circ}35'$ , long.  $116^{\circ}12'$ , in sec. 36, T. 32 N., R. 51 E., at highway bridge at Palisade, 100 feet below Southern Pacific Railroad bridge and 1 mile above mouth of Pine Creek.

Drainage area.- 5,010 square miles.

Records available.— November 1902 to October 1906, July 1911 to September 1936.

Average discharge.- 28 years (1903-6, 1911-36), 331 second-feet.

Extremes.—Maximum discharge observed during year, 2,290 second-feet Apr. 22 (gage height, 6.44 feet); minimum observed, 11 second-feet Nov. 9 (gage height, 1.18 feet).

1902-6, 1911-36: Maximum discharge observed, 4,300 second-feet Mar. 5, 1921  
gage height, 6.6 feet); minimum, 2 second-feet Aug. 25-28, 1931.

Remarks.— Records fair. Gage read once daily. Water is diverted for irrigation of about 150,000 acres of hay and pasture land above station.

Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	19	18	24	28	43	202	510	1,970	1,150	390	65	20
2	20	16	22	31	43	212	292	1,860	1,290	342	67	22
3	19	18	22	32	46	212	310	1,810	1,890	286	69	29
4	20	16	24	31	49	226	326	1,720	1,750	226	65	28
5	16	14	22	34	53	236	323	1,680	1,480	212	61	29
6	16	14	25	37	53	247	516	1,570	1,890	198	71	28
7	14	12	26	36	51	258	329	1,470	2,040	189	69	28
8	14	13	28	38	46	252	383	1,520	1,860	184	65	27
9	14	11	30	37	48	280	427	1,260	1,750	176	61	25
10	14	12	51	36	49	304	515	1,220	1,540	184	59	27
11	13	13	52	33	52	310	567	1,190	1,400	180	55	25
12	14	13	51	33	57	323	750	1,220	1,290	172	50	26
13	13	16	53	37	88	359	832	1,230	1,270	168	47	27
14	14	14	52	53	154	342	1,040	1,200	1,520	168	45	26
15	16	14	31	62	221	329	1,120	1,190	1,260	160	41	25
16	15	13	50	74	231	323	1,320	1,250	1,150	145	38	26
17	16	14	53	63	239	349	1,390	1,230	1,070	134	39	27
18	17	16	51	65	193	376	1,510	1,200	988	124	36	27
19	16	16	29	63	184	405	1,610	1,250	964	111	35	28
20	18	17	50	59	189	398	1,860	1,260	928	102	33	27
21	18	18	51	55	202	420	2,090	1,290	832	94	32	29
22	19	19	29	52	216	466	2,290	1,270	770	91	31	27
23	18	18	50	48	236	383	2,240	1,260	740	125	28	27
24	20	19	28	47	226	362	2,210	1,230	690	168	27	27
25	18	17	27	50	202	349	2,100	1,220	651	124	25	27
26	18	18	28	52	193	323	2,020	1,190	613	97	22	29
27	19	20	28	54	189	316	1,950	1,130	558	81	22	27
28	19	22	27	55	184	316	2,090	1,100	524	76	22	27
29	20	25	25	52	176	329	2,070	1,060	450	74	20	27
30	19	24	28	47	-	516	2,050	1,020	420	74	20	29
31	20	-	29	44	-	329	-	1,010	-	69	18	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						526	20	13	17.0	1,040		
November.....						486	24	11	16.3	967		
December.....						876	33	22	28.3	1,740		
Calendar year 1935.....						80,498	1,890	11	221	159,700		
January.....						1,458	82	28	47.0	2,890		
February.....						3,913	239	43	155	7,760		
March.....						9,822	466	202	317	19,480		
April.....						36,630	2,290	292	1,220	72,660		
May.....						40,900	1,970	1,010	1,320	81,120		
June.....						34,528	2,040	420	1,150	68,490		
July.....						4,924	390	69	159	9,770		
August.....						1,338	71	18	43.2	2,650		
September.....						803	29	20	27.0	1,590		
Water year 1935-36.....						136,206	2,290	11	372	270,160		

## Humboldt River near Imlay, Nev.

Location.— Water-stage recorder, lat.  $40^{\circ}41'$ , long.  $118^{\circ}13'$ , in SW $\frac{1}{4}$  sec. 25, T. 33 N., R. 33 E., 600 feet above old Calahan Dam and 4 miles northwest of Imlay.

Drainage area.— 13,500 square miles.

Records available.— June 1935 to September 1936.

Extremes.— Maximum daily discharge during year, 564 second-feet June 4 (gage height, 5.44 feet); no flow Oct. 1 to about Dec. 31.

1935-36: Maximum discharge, that of June 4, 1936; no flow June 1-18, Sept. 17 to about Dec. 31, 1935.

Remarks.— Records good. Discharge estimated Jan. 1 to Mar. 5. Station is immediately above flow line of the Rye Patch Reservoir and about 9 miles below the Humboldt-Lovelock Irrigation Light & Power Co.'s feeder canal. The Humboldt-Lovelock Irrigation Light & Power Co.'s outlet canal discharges into the Rye Patch Reservoir. Flow also affected by numerous irrigation diversions above station. Daily-discharge record furnished by U. S. Bureau of Reclamation. Occasional discharge measurements and computations of monthly discharge by U. S. Geological Survey.

## Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							4	286	263	466	476	117
2							4	273	270	495	460	113
3							4	263	279	558	462	110
4							4	261	272	564	462	104
5							4	254	284	543	466	99
6							4	251	257	508	452	95
7							5	247	273	485	444	92
8							5	245	254	466	446	87
9							5	244	281	464	440	83
10							5	237	288	466	408	82
11							5	228	324	483	392	101
12							5	225	377	476	362	97
13							5	228	452	468	359	88
14							5	232	472	472	329	86
15							5	225	491	474	316	92
16							5	184	506	470	297	81
17							10	159	525	468	282	79
18							165	153	533	472	267	75
19							174	170	514	472	246	69
20							187	160	478	470	213	66
21							198	147	495	464	186	63
22							210	147	476	468	181	61
23							220	142	442	470	192	59
24							234	143	432	468	181	57
25							244	181	434	472	166	54
26							251	190	440	452	159	52
27							256	187	438	373	149	51
28							263	261	462	434	150	50
29							273	270	466	512	143	49
30							281	269	456	512	135	48
31							290	-	412	-	124	48
Month							Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet	
October.....							0	0	0	0	0	
November.....							0	0	0	0	0	
December.....							0	0	0	0	0	
Calendar year .....												
January.....							156	-	-	5	307	
February.....							145	-	-	5	288	
March.....							3,330	290	4	107	6,600	
April.....							6,452	286	142	215	12,800	
May.....							12,376	533	263	399	24,550	
June.....							14,365	564	373	479	28,490	
July.....							9,325	476	124	301	18,500	
August.....							2,408	117	48	77.7	4,780	
September.....							685	48	1	22.8	1,360	
Water year 1935-36.....							49,241	564	0	135	97,670	

## Rye Patch Reservoir near Rye Patch, Nev.

Location.— Mercury-indicating gage, lat.  $40^{\circ}28'15''$ , long.  $118^{\circ}18'20''$ , in NE $\frac{1}{4}$  sec. 18, T. 30 N., R. 33 E., at control works at left end of Rye Patch Dam, 2 miles north-west of Rye Patch.

Records available.— February to September 1936.

Remarks.— Rye Patch Dam, constructed by the U. S. Bureau of Reclamation and completed in 1936, has an impounding capacity of 179,000 acre-feet. Records furnished by U. S. Bureau of Reclamation.

## Contents, in acre-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1					-	4,810	5,160	4,010	10,890	15,520	9,810	
2					-	365	5,110	5,130	3,980	11,460	15,130	9,810
3					-	391	5,390	5,080	4,010	11,830	14,920	9,780
4					-	398	5,710	5,020	4,360	12,200	14,870	9,790
5					-	402	6,340	4,760	4,620	12,620	14,500	9,780
6					-	406	6,670	4,530	4,830	13,040	14,310	9,790
7					-	412	6,850	4,480	5,000	13,500	14,110	9,780
8					-	416	7,120	4,480	5,110	13,900	13,920	9,730
9					-	418	7,240	4,470	5,170	14,340	13,500	9,700
10					-	420	7,400	4,460	5,230	14,760	13,460	9,740
11					-	423	7,480	4,330	5,260	15,280	13,100	9,780
12					-	424	7,800	4,310	5,400	15,520	12,960	9,840
13					-	429	7,840	4,070	5,540	15,840	12,740	9,880
14					-	435	7,680	4,060	5,750	16,060	12,590	9,900
15					-	436	7,720	4,100	5,960	16,330	12,340	9,950
16					-	441	7,760	4,180	6,200	16,550	12,120	9,960
17					-	440	7,740	4,270	6,340	16,750	11,910	10,010
18					-	446	7,860	4,370	6,640	16,860	11,760	10,010
19					-	478	7,650	4,540	6,860	16,950	11,540	10,010
20					289	808	7,500	4,550	7,150	17,020	11,400	10,010
21					-	1,120	7,480	4,760	7,470	16,990	11,150	10,000
22					304	1,470	7,320	4,850	7,780	17,010	10,930	10,000
23					-	1,770	7,040	4,890	8,110	16,970	10,780	9,980
24					314	2,120	6,800	4,900	8,500	16,730	10,660	9,940
25					320	2,470	6,550	4,900	8,820	16,700	10,610	9,940
26					336	2,810	6,210	4,680	9,180	16,510	10,410	9,920
27					352	3,180	6,060	4,450	9,460	16,400	10,260	9,930
28					364	3,510	5,880	4,300	9,720	16,300	10,120	9,830
29					373	3,610	5,630	4,190	9,990	16,200	9,990	9,800
30					-	4,370	5,460	4,140	10,540	16,000	9,890	9,790
31					-	4,540	-	4,090	-	15,760	9,890	-

## HUMBOLDT RIVER BASIN

Humboldt River near Rye Patch, Nev.

Location. - Water-stage recorder, lat.  $40^{\circ}27'25''$ , long.  $118^{\circ}18'20''$ , in NE $\frac{1}{4}$ NE $\frac{1}{4}$  sec. 19, T. 30 N., R. 33 E., 5,000 feet below Rye Patch Dam and 1 mile northwest of Rye Patch.

Drainage area. - 13,700 square miles.

Records available. - October 1935 to September 1936 at present site. January 1896 to December 1909, September 1910 to September 1922, September 1924 to September 1932 (fragmentary) near Oreana, 7 miles downstream; records practically comparable.

Average discharge. - 24 years (1899-1909, 1910-16, 1917-22, 1930-32, 1935-36), 217 second-feet.

Extremes. - Maximum daily discharge during year, 477 second-feet May 26; no flow Oct. 1 to Mar. 29, Sept. 10-30.

1896-1922, 1924-32, 1935-36: Maximum discharge, 3,050 second-feet May 12, 1897 (gage height, 12.0 feet, former site); no flow during periods in 1905, 1915, 1918-20, 1931, 1932, 1935, 1936.

Remarks. - Records good. Discharge computed from gate openings at dam Aug. 1 to Sept. 9. Flow completely regulated by Rye Patch Reservoir (capacity, 179,000 acre-feet), 5,000 feet upstream, also affected by many irrigation diversions and storage in Taylor-Pitt Reservoirs above station. Records furnished by U. S. Bureau of Reclamation.

## Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1						0	70	392	465	214	282	66
2						0	73	392	451	216	275	73
3						0	75	390	424	211	260	82
4						0	76	395	409	191	234	73
5						0	78	392	415	193	223	65
6						0	79	353	418	191	222	65
7						0	80	319	424	200	222	57
8						0	94	319	427	196	222	38
9						0	124	329	430	182	221	15
10						0	127	367	430	193	220	0
11						0	128	365	409	182	220	0
12						0	159	369	383	161	210	0
13						0	191	397	567	153	195	0
14						0	191	434	549	149	195	0
15						0	191	434	355	136	189	0
16						0	192	421	355	136	182	0
17						0	191	400	359	153	182	0
18						0	191	392	327	184	172	0
19						0	189	383	331	185	166	0
20						0	187	387	325	185	156	0
21						0	264	387	311	187	155	0
22						0	345	387	297	185	146	0
23						0	345	387	286	187	132	0
24						0	343	387	290	187	132	0
25						0	343	421	293	189	132	0
26						0	341	477	295	189	131	0
27						0	339	473	279	216	131	0
28						0	357	473	250	250	115	0
29						0	392	469	229	284	99	0
30						35	392	469	205	309	68	0
31						68	-	465	-	311	77	-
Month						Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
October.....						0	0	0	0	0	0	
November.....						0	0	0	0	0	0	
December.....						0	0	0	0	0	0	
Calendar year .....												
January.....						0	0	0	0	0	0	
February.....						0	0	0	0	0	0	
March.....						103	68	0	5.3	204		
April.....						1,147	392	70	205	12,190		
May.....						12,425	477	519	401	24,640		
June.....						10,666	466	205	352	20,960		
July.....						6,105	311	136	197	12,110		
August.....						5,574	282	77	180	11,060		
September.....						534	82	0	17.8	1,060		
Water year 1935-36.....						41,454	477	0	113	82,220		

## Martin Creek near Paradise Valley, Nev.

Location. - Water-stage recorder, lat. 41°32', long. 117°26', in SE<sup>1/4</sup>NE<sup>1/4</sup> sec. 11, T. 42 N., R. 40 E., 1½ miles above Silver State flour mill and 8 miles northeast of Paradise Valley.

Records available. - October 1921 to September 1936.

Average discharge. - 14 years (1921-26, 1927-36), 23.0 second-feet.

Extremes. - Maximum discharge during year, 200 second-feet Apr. 23 (gage height, 6.93 feet); minimum not recorded.

1921-36: Maximum discharge, about 1,000 second-feet Feb. 21 or 22, 1927 (gage height, about 12 feet), from rating curve extended above 200 second-feet; minimum, 2 second-feet Sept. 1-9, 1928.

Remarks. - Records fair. Discharge for Oct. 1-5, Nov. 19-30, Dec. 2 to Mar. 19, May 7-9, June 2, 3 estimated. No diversions above gage.

## Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	5	6	5				18	101	83	12	5	5
2	5	6					20	106	75	11	5	5
3	5	6					22	115	65	11	5	5
4	5	5					22	122	63	10	5	5
5	5	5					16	124	52	9	5	6
6	5	6					20	110	50	8	5	6
7	5	6					39	95	59	9	5	6
8	5	6					67	85	50	11	5	6
9	5	6					76	90	49	10	5	5
10	5	6					25	102	93	44	9	5
11	5	6					137	101	39	9	5	5
12	5	6					152	106	37	9	5	5
13	5	6					163	116	38	8	5	5
14	5	6					168	124	36	7	5	6
15	5	6					171	126	34	7	5	6
16	5	6					175	115	31	7	5	6
17	5	6					178	106	28	6	5	6
18	5	6					178	94	26	6	5	6
19	5	6					176	92	24	6	5	6
20	5	6					93	167	87	22	6	5
21	5	6					116	170	77	22	6	5
22	5	6					86	183	64	20	7	5
23	6	6					65	183	59	20	6	5
24	6	6					52	175	53	20	6	5
25	6	5					34	152	55	18	5	5
26	6	5					26	145	57	18	5	6
27	6	5					27	138	58	15	5	6
28	6	5					25	130	57	14	5	6
29	6	5					24	120	55	14	5	6
30	6	5					23	106	50	13	5	6
31	6	-					24	-	50	-	5	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	164	6	5	5.3	325
November.....	172	6	5	5.7	341
December.....	186	-	-	6	369
Calendar year 1935 .....	10,734	202	-	29.4	21,300
January.....	217	-	-	7	430
February.....	290	-	-	10	575
March.....	1,070	116	-	34.5	2,120
April.....	3,569	183	16	119	7,080
May.....	2,741	126	50	88.4	5,440
June.....	1,079	83	13	36.0	2,140
July.....	231	12	5	7.5	458
August.....	166	5	5	5.0	307
September.....	165	6	5	5.5	329
Water year 1935-36.....	10,040	183	-	27.4	19,910

## HUMBOLDT RIVER BASIN

Humboldt-Lovelock Irrigation, Light & Power Co.'s outlet canal near Humboldt, Nev.

Location. - Water-stage recorder and weir, lat.  $40^{\circ}36'25''$ , long.  $118^{\circ}18'20''$ , in SE $\frac{1}{4}$  sec. 30, T. 32 N., R. 33 E., at outlet of lower Taylor-Pitt Reservoir, 2 $\frac{1}{2}$  miles west of Humboldt. Prior to April 1936 staff gage at same site and datum.

Records available. - February 1914 to September 1920, October 1921 to September 1936.

Average discharge. - 21 years, 12.7 second-feet.

Remarks. - Records good. Flow regulated by reservoir outlet gates a few hundred feet upstream. Canal conducts stored water released from Taylor-Pitt Reservoirs to Humboldt River in SW $\frac{1}{4}$  sec. 31, T. 32 N., R. 33 E., for irrigation in Lovelock Valley, several miles downstream. Records of daily discharge furnished by Humboldt River water commissioner.

Discharge, in second-feet, 1934-36

Day	1934			1936						
			Apr.		Apr.	May	June	July	Aug.	Sept.
1			0		0	80	0	18	60	19
2			0		0	80	0	18	55	32
3			0		0	80	0	9	55	37
4			0		0	80	0	0	47	30
5			0		0	75	0	0	38	19
6			0		0	52	0	0	38	19
7			0		0	47	0	10	38	19
8			0		0	47	0	18	38	20
9			0		0	61	8	18	38	19
10			0		0	76	14	18	38	9
11			0		0	75	0	7	38	0
12			0		0	64	0	0	30	0
13			0		0	47	0	0	13	0
14			0		0	47	0	0	11	0
15			0		0	47	0	0	5	0
16			0		0	33	0	0	0	0
17			0		0	18	0	0	15	0
18			37		0	9	0	0	11	0
19			98		0	0	0	0	0	0
20			98		0	0	12	0	0	0
21			98		94	0	18	0	14	0
22			96		125	0	18	0	19	0
23			98		125	0	18	0	19	0
24			96		108	0	18	0	19	0
25			98		80	0	19	0	19	0
26			65		80	0	13	0	19	0
27			0		80	0	0	41	19	0
28			0		80	0	0	55	19	0
29			0		80	0	0	69	18	0
30			0		80	0	9	73	18	0
31			-		-	0	-	73	19	-
Month				Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet		
April 1934.....				784	98	0	26.1	1,560		
Water year 1933-34.....				784	98	0	2.1	1,560		
April 1936.....				932	125	0	31.1	1,850		
May.....				1,018	80	0	32.8	2,020		
June.....				147	19	0	4.9	292		
July.....				427	73	0	13.8	847		
August.....				770	60	0	24.8	1,530		
September.....				223	37	0	7.4	442		
Water year 1935-36.....				3,517	125	0	9.6	6,980		

Note. - No flow October, 1933, to March 1936 except Apr. 18-26, 1934.

## Pyramid Lake near Nixon, Nev.

Location.— Elevations since 1904 determined by spirit leveling (lat.  $39^{\circ}50'30''$  long.  $115^{\circ}27'30''$ ) at south end of lake adjacent to General Land Office benchmark 1, which is top of iron post in forks of road about 900 feet north of the quarter corner of secs. 29 and 30, T. 23 N., R. 23 E., and  $\frac{4}{5}$  miles west of Pyramid Lake Sanatorium, at Nixon. Elevation of benchmark 1 is 3,882.258 feet above mean sea level, based on adjustments of 1912 of elevations of benchmarks along precise level lines of the U. S. Coast and Geodetic Survey. Location of observations prior to 1904 unknown.

Records available.— Occasional elevations 1926 to September 1936. Elevations taken in occasional years 1867 to 1925.

Remarks.— Records furnished by U. S. Indian Service.

Elevation, in feet, above mean sea level, water year 1935-36

Oct. 21	3,821.0	Apr. 24	3,819.6
Nov. 22	3,820.35	May 23	3,819.95
Dec. 23	3,819.9	June 3	3,820.4
Jan. 20	3,819.85	July 20	3,819.9
Feb. 24	3,819.6	Aug. 18	3,819.65
Mar. 19	3,819.55	Sept. 21	3,818.9

## Lake Tahoe at Tahoe, Calif.

Location.— Staff gage, lat.  $39^{\circ}9'55''$ , long.  $120^{\circ}8'25''$ , in NW $\frac{1}{4}$  sec. 7, T. 15 N., R. 17 E., near outlet of lake at Tahoe. Zero of gage is 8,219.01 feet above mean sea level on basis general adjustment of 1929 of U. S. Coast and Geodetic Survey level net; rim of lake (natural control of outlet) is 6,222.01 feet above mean sea level; sill of outlet gates is 6,218.01 feet above mean sea level.

Drainage area.— 519 square miles (including water surface of lake, which is 193 square miles).

Records available.— 1900 to September 1936.

Extremes.— Maximum stage during year, 5.90 feet July 2-7; minimum, 2.22 feet Dec. 11, 25, 26.

1900-1936: Maximum stage, 11.26 feet July 14, 15, 17, 18, 1907; minimum, 1.74 feet Dec. 26, 1934.

Remarks.— Gage read to hundredths once daily. Records furnished by Truckee-Carson Irrigation District.

## Gage height, in feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	2.91	2.44	2.28	2.31	2.91	3.78	3.95	4.50	5.24	5.89	5.74	5.18
2	2.91	2.49	2.27	2.34	2.98	3.78	3.95	4.52	5.26	5.90	5.72	5.15
3	2.90	2.51	2.26	2.36	3.00	3.77	3.96	4.54	5.29	5.90	5.70	5.12
4	2.89	2.50	2.25	2.36	3.00	3.77	3.98	4.56	5.33	5.90	5.68	5.13
5	2.88	2.48	2.25	2.37	2.99	3.78	3.98	4.57	5.35	5.90	5.66	5.15
6	2.86	2.46	2.25	2.37	2.99	3.79	3.98	4.58	5.36	5.90	5.65	5.13
7	2.85	2.45	2.24	2.36	2.99	3.80	3.99	4.60	5.41	5.90	5.63	5.11
8	2.83	2.46	2.24	2.36	2.98	3.80	3.99	4.62	5.45	5.89	5.61	5.10
9	2.82	2.45	2.23	2.47	2.98	3.80	4.00	4.65	5.48	5.89	5.59	5.10
10	2.81	2.43	2.23	2.55	2.97	3.80	4.00	4.68	5.51	5.89	5.58	5.08
11	2.80	2.42	2.22	2.65	3.00	3.81	4.01	4.72	5.53	5.89	5.57	5.07
12	2.80	2.41	2.29	2.66	3.12	3.81	4.02	4.76	5.55	5.89	5.56	5.05
13	2.78	2.39	2.30	2.67	3.22	3.81	4.03	4.79	5.58	5.89	5.56	5.01
14	2.76	2.37	2.29	2.74	3.29	3.81	4.04	4.83	5.60	5.89	5.55	4.97
15	2.75	2.36	2.28	2.79	3.30	3.81	4.06	4.86	5.62	5.88	5.50	4.94
16	2.77	2.35	2.28	2.84	3.33	3.81	4.08	4.89	5.64	5.85	5.51	4.92
17	2.75	2.36	2.27	2.86	3.35	3.81	4.11	4.93	5.64	5.87	5.49	4.90
18	2.73	2.35	2.26	2.87	3.35	3.82	4.14	4.97	5.67	5.87	5.47	4.89
19	2.71	2.34	2.24	2.87	3.36	3.82	4.17	4.99	5.69	5.86	5.44	4.88
20	2.69	2.34	2.23	2.86	3.38	3.83	4.21	5.00	5.71	5.85	5.41	4.88
21	2.67	2.33	2.23	2.86	3.41	3.83	4.25	5.02	5.73	5.85	5.38	4.87
22	2.65	2.33	2.23	2.86	3.51	3.84	4.28	5.03	5.76	5.84	5.36	4.87
23	2.60	2.33	2.23	2.86	3.64	3.84	4.31	5.05	5.79	5.84	5.33	4.86
24	2.57	2.33	2.23	2.86	3.70	3.86	4.34	5.08	5.81	5.84	5.30	4.84
25	2.55	2.32	2.22	2.86	3.75	3.86	4.37	5.11	5.84	5.83	5.28	4.83
26	2.55	2.32	2.22	2.87	3.77	3.85	4.40	5.14	5.86	5.81	5.26	4.80
27	2.54	2.31	2.24	2.87	3.78	3.85	4.42	5.17	5.87	5.79	5.24	4.76
28	2.53	2.30	2.24	2.88	3.78	3.85	4.44	5.19	5.88	5.78	5.22	4.74
29	2.50	2.29	2.30	2.88	3.78	3.88	4.46	5.20	5.88	5.77	5.21	4.73
30	2.48	2.28	2.30	2.87	-	3.89	4.48	5.21	5.88	5.76	5.21	4.72
31	2.46	-	2.31	2.87	-	3.94	-	5.22	-	5.75	5.20	-

## PYRAMID AND WINNEMUCCA LAKES BASIN

Truckee River at Tahoe, Calif.

Location.— Staff gage, lat.  $39^{\circ}9'55''$ , long.  $120^{\circ}8'45''$ , in NW $\frac{1}{4}$  sec. 7, T. 15 N., R. 17 E., at Tahoe, just below dam at outlet of Lake Tahoe. Altitude, about 6,200 feet.

Drainage area.— 519 square miles.

Records available.— July 1895 to February 1896, June 1900 to September 1936.

Average discharge.— 36 years (1900-1936), 247 second-feet.

Extremes.— Maximum daily discharge during year, 471 second-feet Aug. 6-10; no flow several months.

1895-96, 1900-1936: Maximum daily discharge, 1,340 second-feet July 13-20, 1907; no flow during parts of 1900, 1901, 1914, 1918-36.

Remarks.— Flow regulated by operation of gates in dam at Lake Tahoe and occasionally by pumping from the lake. Daily-discharge record furnished by Truckee-Carson Irrigation District.

Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1					0	52				18	430	392
2					0	52				44	443	381
3					0	50				46	448	369
4					0	50				62	453	373
5					0	52				89	461	381
6					0	53				151	471	373
7					0	54				163	471	365
8					0	54				189	471	361
9					0	54				215	471	361
10					0	38				236	471	354
11					0	0				277	465	350
12					3	0				301	451	343
13					6	0				313	441	329
14					9	0				319	441	315
15					9	0				322	441	305
16					11	0				322	441	299
17					12	0				322	447	292
18					12	0				322	457	289
19					13	0				330	461	286
20					14	0				336	461	286
21					16	0				336	451	283
22					15	0				336	449	283
23					0	0				340	443	280
24					0	0				350	439	273
25					0	0				356	451	270
26					0	0				357	423	261
27					0	0				371	416	249
28					0	0				361	408	244
29					14	0				397	404	241
30					-	0				402	404	238
31					-	0				411	400	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	0	0	0	0	0
November.....	0	0	0	0	0
December.....	0	0	0	0	0
Calendar year 1935.....	1,999	50	0	5.48	3,960
January.....	0	0	0	0	0
February.....	134	16	0	4.62	266
March.....	509	54	0	16.4	1,010
April.....	0	0	0	0	0
May.....	0	0	0	0	0
June.....	0	0	0	0	0
July.....	8,388	411	18	271	16,640
August.....	13,764	471	400	444	27,300
September.....	9,426	392	238	314	18,700
Water year 1935-36.....	32,221	471	0	88.0	63,920

## Truckee River at Iceland, Calif.

Location.— Water-stage recorder, lat.  $39^{\circ}22'35''$ , long.  $120^{\circ}1'35''$ , in SW $\frac{1}{4}$  sec. 31, T. 18 N., R. 18 E., above dam of National Ice Co. at Iceland. Altitude, about 5,420 feet.

Drainage area.— 937 square miles.

Records available.— August 1912 to September 1936. September 1899 to August 1912 at Nevada-California State line, 3 miles downstream.

Average discharge.— 24 years (1912-36), 630 second-feet.

Extremes.— Maximum daily discharge during year, 3,314 second-feet Apr. 18; minimum, 51 second-feet Oct. 9.

1899-1936: Maximum daily discharge, 15,300 second-feet Mar. 18, 1907 (gage height, 11.5 feet); minimum, 28 second-feet Dec. 18, 1930.

Remarks.— Flow regulated by operation of gates in dam at Lake Tahoe. Daily-discharge record furnished by Truckee-Carson Irrigation District.

## Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	58	64	69	112	164	373	673	1,695	993	514	489	428
2	67	90	67	112	137	368	660	2,199	845	564	496	422
3	58	93	73	121	143	378	687	2,524	896	552	489	422
4	56	85	78	150	178	394	647	2,760	830	514	483	428
5	52	85	71	137	160	421	584	2,714	825	520	489	434
6	52	85	71	121	238	427	609	2,178	1,150	520	506	428
7	52	112	73	99	186	437	741	1,978	2,272	514	508	416
8	52	104	73	112	186	488	965	1,978	1,663	520	514	410
9	51	107	69	124	201	584	1,140	2,136	1,176	501	520	410
10	78	104	71	182	197	673	1,564	2,283	1,143	508	527	398
11	112	99	73	477	209	622	1,755	2,377	1,279	520	527	392
12	124	90	118	283	251	680	2,140	2,588	1,461	526	508	381
13	121	78	164	260	274	803	2,476	2,557	1,550	539	502	369
14	121	69	160	251	322	825	2,693	2,760	1,218	539	489	357
15	134	78	160	680	322	883	2,852	2,451	1,111	539	483	357
16	93	78	137	584	265	927	3,201	2,241	1,055	545	483	352
17	78	90	73	342	197	1,059	3,251	2,199	1,095	539	477	346
18	76	78	78	279	171	1,132	3,514	2,083	1,185	514	483	341
19	76	71	78	279	171	1,220	3,138	2,031	1,071	520	489	341
20	73	69	88	226	182	1,346	3,001	1,663	1,135	526	489	341
21	73	78	93	209	322	1,549	3,076	1,404	1,079	520	483	346
22	69	68	99	194	1,099	1,483	3,201	1,510	1,063	514	477	341
23	67	85	99	186	720	1,182	3,226	1,461	1,079	508	471	335
24	69	83	99	186	541	1,020	2,976	1,653	1,063	508	465	330
25	69	78	99	182	399	897	2,532	1,842	986	508	459	330
26	69	71	101	160	399	818	2,512	1,779	910	501	459	341
27	69	71	96	197	373	840	2,405	1,684	697	501	453	302
28	69	73	93	197	383	882	2,243	1,716	670	501	447	302
29	71	71	99	157	352	870	2,029	1,568	552	508	447	319
30	71	62	109	146	—	790	1,685	1,152	514	508	440	313
31	67	—	112	150	—	713	—	1,047	—	508	434	—

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	2,347	134	51	75.7	4,660
November.....	2,489	112	62	85.0	4,940
December.....	2,943	164	67	94.9	5,840
Calendar year 1935.....	185,563	2,640	49	508	368,100
January.....	6,895	680	99	222	13,680
February.....	8,742	1,099	137	301	17,340
March.....	26,084	1,549	368	809	49,750
April.....	61,876	3,314	584	2,063	122,700
May.....	61,811	2,760	1,047	1,894	122,600
June.....	32,346	2,272	514	1,078	64,160
July.....	16,119	564	501	520	31,970
August.....	14,988	527	434	483	29,730
September.....	11,032	454	302	368	21,080
Water year 1935-36.....	246,672	3,314	51	674	489,200

## PYRAMID AND WINNEMUCCA LAKES BASIN

Donner Creek near Truckee, Calif.

Location.— Water-stage recorder, lat.  $39^{\circ}19'15''$ , long.  $120^{\circ}12'10''$ , in SE $\frac{1}{4}$  sec. 16, T. 17 N., R. 16 E., 1 mile below Cold Creek and  $1\frac{1}{2}$  miles southwest of Truckee. Altitude, about 5,800 feet.

Drainage area.— 30 square miles.

Records available.— October 1902 to September 1915, April 1928 to September 1936.

Extremes.— Maximum daily discharge during year, 653 second-feet June 7; minimum daily discharge observed, 3 second-feet Oct. 1-13, 17-29.

1902-15, 1928-36: Maximum discharge, 980 second-feet Mar. 18, 1907 (gage height, 5.5 feet, former datum); minimum, less than 1 second-foot during many summers.

Remarks.— No records Oct. 30 to Dec. 31. No diversions. Flow is partly controlled by outlet gates at Donner Lake. Daily-discharge record furnished by Truckee-Carson Irrigation District.

Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	3			5	32	20	129	230	235	93	7	4
2	33			5	65	23	127	269	104	101	7	4
3	33			5	40	26	127	316	95	82	7	4
4	33			9	39	25	126	344	94	85	7	5
5	3			6	36	23	124	384	105	57	6	5
6				5	39	23	122	357	199	54	6	5
7	3			5	44	25	121	384	653	49	6	4
8	3			5	36	29	120	394	370	44	6	4
9	3			6	39	33	133	408	145	38	5	4
10	3			12	39	32	147	404	170	33	6	4
11	3			43	54	33	166	391	251	50	6	4
12	33			34	70	40	189	404	278	30	7	4
13	33			13	47	50	212	421	301	29	6	4
14	5			45	41	52	235	452	290	25	6	4
15	5			96	41	53	262	425	253	24	6	4
16	5			72	38	58	275	409	200	23	5	4
17	3			48	32	62	291	452	172	21	5	4
18	3			49	29	66	327	460	150	16	5	4
19	3			25	29	147	371	442	180	16	5	4
20	3			22	36	226	380	332	200	16	5	4
21	3			36	53	219	425	266	196	15	5	4
22	3			43	91	216	448	275	196	13	5	4
23	3			34	53	210	480	290	203	12	5	4
24	3			29	36	206	460	320	196	12	5	4
25	3			18	25	201	442	344	172	11	5	4
26	3			16	30	197	435	319	136	10	5	4
27	3			16	25	192	383	322	103	8	5	4
28	3			19	22	182	341	329	84	8	5	4
29	3			23	20	154	287	320	77	7	5	4
30	-			32	-	132	263	295	75	7	5	4
31	-			31	-	132	-	284	-	7	4	-
Month					Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet			
<u>October 1-29</u>					93	5	3	3.2	184			
<u>November</u>					-	-	-	-	-			
<u>December</u>					-	-	-	-	-			
<u>Calendar year</u>												
<u>January</u>					809	96	5	26.1	1,600			
<u>February</u>					1,181	91	20	40.7	2,340			
<u>March</u>					3,037	226	20	98.0	6,020			
<u>April</u>					7,943	480	120	265	15,750			
<u>May</u>					11,040	460	230	356	21,900			
<u>June</u>					5,913	653	75	197	11,750			
<u>July</u>					957	101	7	30.9	1,900			
<u>August</u>					174	7	4	5.6	345			
<u>September</u>					123	5	4	4.1	244			
<u>Water year</u>												

Deep Creek above Adel, Oreg.

Location.-- Water-stage recorder, lat.  $42^{\circ}11'$ , long.  $119^{\circ}59'$ , in E $\frac{1}{2}$  sec. 15, T. 39 S., R. 23 E., a third of a mile below Drake Creek and 5 miles west of Adel.

Records available.—September 1922 to September 1923, October 1932 to September 1936  
In reports of U. S. Geological Survey; September 1922 to September 1923, October  
1929 to September 1930 in reports of State engineer.

Extremes.— Maximum discharge during year, 1,140 second-feet Apr. 17 (gage height, 4.61 feet); minimum, 3.2 second-feet Nov. 3 (gage height, 0.35 foot).

1922-23, 1932-36: Maximum discharge, 1,620 second-feet Apr. 16, 1935 (gage height, 5.28 feet); minimum, 1.7 second-feet July 20, 27-29, 1934.

Maximum discharge known, 4,950 second-feet Mar. 2, 1910, observed at station 5 miles downstream at Adel.

Remarks.— Records good except those for period of ice effect, Dec. 16-25, Jan. 17-18, 22-24, Jan. 29 to Feb. 4, Feb. 8-26, which were estimated on basis of 2 discharge measurements, weather records, and records for station on Chewaucan River near Paisley and are poor. Diversions for irrigation above station.

Rating tables, water year 1935-36 except periods of ice effect  
(gage height, in feet, and discharge, in second-feet)

Oct. 1 to Apr. 16				Apr. 17 to Sept. 30			
0.4	4.5	2.0	183	0.4	4.5	2.0	163
.6	12	2.5	300	.6	11	2.5	276
.8	23	3.0	445	.8	20	3.0	422
1.0	37	3.5	630	1.0	33	3.5	600
1.2	56	4.0	860	1.2	52	4.0	820
1.5	95	4.5	1,130	1.5	86	4.6	1,140
1.7	126			1.7	113		

Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	8	14	11	12	16	45	84	490	183	25	8	7
2	9	10	12	11	16	56	89	506	183	24	8	9
3	9	8	12	11	16	72	87	525	149	22	7	9
4	9	10	12	12	16	85	81	560	156	21	7	9
5	9	14	12	11	16	107	77	620	150	20	8	9
6	9	16	14	11	15	115	121	542	143	19	8	9
7	9	17	15	11	14	121	266	422	173	18	7	7
8	9	17	16	11		157	345	400	198	18	8	8
9	9	18	14	12		222	401	403	171	18	8	8
10	9	18	15	12		222	532	419	142	19	8	8
11	10	16	16	16		231	670	438	124	19	9	8
12	12	15	19	15		308	810	456	116	18	9	9
13	14	16	15	16		305	885	455	109	16	9	9
14	12	14	14	19		231	910	506	107	15	8	8
15	12	16	12	19		226	935	506	102	14	7	9
16	14	16	11	18		300	985	438	98	15	7	9
17	14	17	11	16		380	1,020	384	90	15	7	9
18	13	16	11	15		320	995	348	82	12	7	9
19	12	14	12	16		315	970	322	76	12	7	9
20	12	13	13	19		392	920	292	71	11	7	9
21	12	15	12	19		417	895	264	64	11	7	9
22	12	16	11	16		250	895	239	60	11	7	8
23	11	15	11	15		200	995	220	54	11	7	8
24	11	14	13	16		198	995	209	52	11	7	8
25	12	14	17	16		167	795	204	46	10	7	8
26	12	15	19	16		115	702	206	38	10	7	8
27	13	13	16	16	44	118	660	204	32	9	7	8
28	15	12	14	16	42	85	820	200	31	8	7	9
29	14	15	13	16	42	88	660	218	30	8	7	10
30	12	14	12	16	-	101	542	266	28	8	7	10
31	13	-	12	16	-	84	-	226	-	6	7	-

Month	Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....	349	14	8	11.3	692
November.....	438	18	8	14.6	869
December.....	417	19	11	13.5	827
Calendar year 1935.....	42,813	1,420	6	117	84,910
January.....	461	19	11	14.9	914
February.....	712	-	-	24.6	1,410
March.....	6,046	417	45	195	11,990
April.....	19,144	1,020	77	638	37,970
May.....	11,472	620	200	370	22,760
June.....	3,040	198	28	101	6,030
July.....	452	25	8	14.6	897
August.....	231	9	7	7.5	458
September.....	260	10	7	8.7	516
Water year 1935-36.....	43,022	1,020	7	118	85,320

## ABERT LAKE BASIN

Chewaucan River above Conn Ditch, near Paisley, Oreg.

Location.— Water-stage recorder, lat.  $42^{\circ}41'$ , long.  $120^{\circ}35'$ , in SW $\frac{1}{4}$  sec. 27, T. 33 S., R. 18 E., at bridge 20 feet below power plant of R. R. Severin, 700 feet above diversion dam of Conn Ditch, a quarter of a mile below mouth of Mill Creek, and  $2\frac{1}{2}$  miles west of Paisley.

Drainage area.— 266 square miles.

Records available.— April to September 1912, May 1924 to September 1936. Records at stations giving practically same yearly run-off are available at former site 2 miles downstream, below Conn Ditch, January 1905 to December 1907, January 1909 to April 1912 and at site 0.5 mile upstream from present site, above Mill Creek, November 1912 to September 1921.

Average discharge.— 26 years (1905-7, 1909-21, 1924-36), 130 second-feet.

Extremes.— Maximum discharge during year, 923 second-feet Apr. 24 (gage height, 4.04 feet); minimum, 0.7 second-foot Aug. 18, 22 (gage height, 0.94 foot).

1905-7, 1909-21, 1924-35: Maximum discharge (estimated), 4,000 second-feet Nov. 23, 1909 (gage height, 9.40 feet, former site and datum); frozen dry part of Dec. 7, 1927, Dec. 12, 1932; minimum daily discharge not determined.

Remarks.— Records good except those estimated for period of ice effect or missing gage height record, which are poor. Low-water flow partly regulated by power plant above station. About 180 acres irrigated above station.

Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.		
1	19			24			*41	74	81	552	288	62	25	27
2	20			24			*40	97	86	591	267	58	27	30
3	23			26			*39	110	79	596	245	54	25	34
4	23				*29		*39	114	81	647	281	52	25	32
5	23						40	127	71	725	258	52	24	31
6	23						42	135	90	608	274	48	24	30
7	23		*21				41	127	149	580	292	45	24	29
8	22						51	42	157	580	302	44	23	28
9	22						51	37	199	227	596	267	45	22
10	22						34	38	165	295	641	224	46	23
11	23				*70		40	160	377	683	202	46	27	25
12	30				88		46	193	460	719	193	44	30	25
13	31				59		48	186	536	731	185	42	29	28
14	28		22		52		*50	152	569	749	176	42	24	30
15	32				73		*55	165	613	737	171	39	22	31
16	31				63		60	182	683	647	168	37	19	31
17	30				*55		56	214	725	596	147	35	18	30
18	29				*51		52	206	737	547	139	34	19	30
19	27				*50		51	202	713	526	132	33	18	30
20	25				*51		50	248	707	474	118	32	18	30
21	24			20	*49		*49	264	707	431	110	30	18	29
22	24				46		*48	188	762	390	101	34	18	27
23	19				48		*47	157	818	369	92	41	17	26
24	20						*46	132	874	365	88	35	17	27
25	24		23				*47	114	790	365	84	31	19	26
26	24						67	97	769	373	76	30	20	25
27	24						68	107	719	375	73	30	21	27
28	24						68	118	695	368	87	28	20	27
29	24						68	118	615	368	87	28	20	27
30	22						-	90	580	390	63	28	20	27
31	19						-	81	-	329	-	26	24	-
Month					Second-foot-days		Maximum		Minimum		Mean		Run-off in acre-feet	
									</					

## Silver Creek near Silver Lake, Oreg.

Location. - Water-stage recorder, lat.  $43^{\circ}7'$ , long.  $121^{\circ}4'$ , in SW $\frac{1}{4}$  sec. 28, T. 28 S., R. 14 E.,  $1\frac{1}{2}$  miles below diversion dam of Silver Lake Irrigation District,  $1\frac{1}{2}$  miles southwest of Silver Lake post office, and 3 miles above mouth of Bridge Creek. Zero of gage is 4,361.28 feet above mean sea level.

Drainage area. - 221 square miles.

Records available. - December 1904 to March 1907, January 1909 to September 1936.

Average discharge. - 28 years (1905-6, 1909-27, 1929-36), including Silver Lake Irrigation District Canal, 26.5 second-feet.

Extremes. - Maximum discharge during year, 42 second-feet Apr. 13; maximum gage height, 2.58 feet July 8; minimum discharge observed, 1.0 second-foot Jan. 22, Feb. 5 (field estimates), and at times in September.

1904-7, 1909-36: Maximum discharge, 1,800 second-feet Mar. 20, 1907 (gage height, 9.08 feet, former datum); no flow at times, 1931, 1932, 1934.

Remarks. - Records good except those for period of ice effect, Nov. 3, Nov. 29 to Dec. 8, Dec. 13 to Mar. 2, Mar. 31 to Apr. 8, which are poor, and were estimated on basis of gage heights, five discharge measurements, and weather records. Silver Lake Irrigation District Canal diverts water above gage during irrigation season. Diversion dam  $1\frac{1}{2}$  miles above gage impounds about 800 acre-feet; also storage in Thompson Valley Reservoir, 10 miles south.

## Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.7	1.8	1.8		1.0	2.3	1.1	30	24	35	1.7	1.4
2	1.7	1.7	1.8		1.0	2.3	1.1	30	25	36	1.4	1.4
3	1.7	1.8	1.9		1.0	2.3	1.2	30	24	36	2.3	1.6
4	1.7	3.0	1.9		1.0	2.3	1.3	30	24	33	2.2	1.6
5	1.7	3.6	1.9		1.0	2.2	1.4	31	24	35	2.0	1.6
6		1.6	3.6	2.0		2.4	2.0	30	25	35	1.8	1.4
7		1.6	3.6	2.0		2.8	3.0	27	24	35	1.6	1.1
8		1.6	3.3	2.5		3.0	5.0	28	22	30	1.7	1.1
9		1.6	2.6	3.6		3.0	8.2	30	22	20	1.6	1.2
10		1.6	2.8	3.6		3.3	11	30	21	20	1.6	1.2
11	1.4	2.3	2.8			3.6	19	30	19	23	1.6	1.2
12	1.4	1.7	2.2			3.6	28	31	22	18	1.6	1.2
13	1.4	1.6	1.9			3.3	39	32	25	16	1.4	1.2
14	1.4	1.7	1.8			2.6	38	36	26	16	1.4	1.2
15	1.4	1.7	1.7			2.6	37	34	26	16	1.4	1.2
16	1.6	1.7				2.6	36	33	24	16	1.2	1.2
17	1.6	1.7				2.6	36	30	22	16	1.2	1.2
18	1.6	1.7				2.8	33	27	24	15	1.4	1.2
19	1.8	1.7				2.8	30	24	25	13	1.4	1.1
20	1.8	1.7				3.0	26	23	24	7.8	1.4	1.1
21	1.8	1.7				4.2	22	22	25	6.6	1.4	1.0
22	1.7	1.6				4.8	24	22	27	7.0	1.4	1.0
23	1.8	1.6				4.8	25	24	30	4.5	1.4	1.0
24	1.7	1.6				5.3	25	26	34	4.5	1.4	1.1
25	1.7	1.7				3.3	26	27	33	4.2	1.4	1.1
26	1.7	1.7				2.8	25	27	35	3.0	1.4	1.1
27	1.7	1.7				2.3	25	27	37	3.3	1.4	1.1
28	1.8	1.7				2.4	2.0	27	26	37	2.4	1.1
29	1.7	1.7				2.4	1.4	28	27	37	2.3	1.4
30	1.8	1.7				-	1.2	30	27	36	2.3	1.2
31	1.7	-				-	1.2	-	24	-	2.2	1.2
										Run-off in acre-feet		
										Month	Second-foot-days	Maximum
										Mean		
										Run-off in acre-feet		
										October	51.0	1.4
										November	62.0	1.6
										December	62.2	3.6
										Calendar year 1935	3,272.1	49
												8.96
												6,480
										January	31	-
										February	42.8	-
										March	86.7	4.8
										April	614.3	39
										May	875	56
										June	803	37
										July	514.1	36
										August	46.9	2.3
										September	36.0	1.6
										Water year 1935-36	3,225.0	39
												8.81
												6,400

## SILVER LAKE BASIN

Silver Lake Irrigation District Canal near Silver Lake, Oreg.

Location.— Staff gage, lat.  $43^{\circ}5'$ , long.  $121^{\circ}5'$ , in NE $\frac{1}{4}$  sec. 5, T. 29 S., R. 14 E., at diversion dam of Silver Lake Irrigation District,  $2\frac{1}{2}$  miles southwest of Silver Lake post office.

Records available.— October 1922 to September 1928, October 1929 to September 1936.

Extremes.— Maximum discharge during year, 34 second-feet May 29; maximum gage height, 2.00 feet May 14, 15; no flow at times.

1922-28, 1929-36: Maximum discharge, 60 second-feet June 26-29, 1923; no flow at times.

Remarks.— Records fair except those for April and May, which are poor. Canal diverts water from Silver Creek that is released from storage in Thompson Valley Reservoir.

Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1								0	13	29	*26	
2								0	17	*29	26	
3								0	19	26	22	
4								0	20	23	*21	
5								0	19	*23	*22	
6								0	19	23	20	
7								0	19	22	*18	
8								0	19	19	18	
9								0	19	18	18	
10								0	19	18	*18	
11								0	19	19	15	
12								0	24	20	*14	
13								0	28	19	*14	
14								0	29	20	*14	
15								0	29	20	*14	
16								0	*29	20	15	
17								0.8	*28	*20	*16	
18								1.4	29	22	*16	
19								1.9	*29	23	17	
20								3.2	*29	23	17	
21								3.7	*29	24	*17	
22								4.6	29	26	17	
23								5.5	25	*26	11	
24								7.2	*30	26	0	
25								8.3	32	26	0	
26								9.4	32	*26	0	
27								10	32	26	0	
28								11	*33	26	0	
29								12	28	*26	0	
30								11	28	26	0	
31								-	29	-	0	
Month								Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....								0	0	0	0	0
November.....								0	0	0	0	0
December.....								0	0	0	0	0
Calendar year												
January.....								0	0	0	0	0
February.....								0	0	0	0	0
March.....								0	0	0	0	0
April.....								90.0	12	0	3.00	179
May.....								786	33	15	25.4	1,560
June.....								694	29	18	23.1	1,380
July.....								406	26	0	13.1	805
August.....								0	0	0	0	0
September.....								0	0	0	0	0
Water year 1935-36.....								1,976.0	33	0	5.40	3,924

\*Interpolated.

## Silvies River near Burns, Oreg.

Location. - Water-stage recorder, lat.  $43^{\circ}43'$ , long.  $119^{\circ}10'$ , in or near SE $\frac{1}{4}$  sec. 25, T. 21 S., R. 29 E., 1 mile below dam site for proposed lower Silvies Reservoir and 11 miles northwest of Burns.

Drainage area. - 940 square miles.

Records available. - May 1903 to July 1906, December 1908 to September 1936.

Average discharge. - 23 years (1903-5, 1909-12, 1917-21, 1922-36), 132 second-feet.  
(22 years, 134 second-feet instead of 131 second-feet as published in Water-Supply Paper 790.)

Extremes. - Maximum discharge during year, 1,520 second-feet Apr. 17 (gage height, 12.62 feet); minimum, 2.2 second-feet July 26 (gage height, 0.78 foot).

1903-6, 1908-36: Maximum discharge, 4,730 second-feet Apr. 15, 1904 (gage height, 17.12 feet, former site and datum); no flow July 19 to Sept. 22, 1934.

Remarks. - Records good except those for August and September, which are fair, those for Oct. 1-13, Oct. 24 to Nov. 12 (estimated on basis of range of stage and weather records), and those for Nov. 13-18, Dec. 1-18, Dec. 26 to Mar. 23 (computed from 2 discharge measurements, weather records, and gage heights), all of which are poor.

A large area on headwaters of Silvies River is irrigated with flood water.

Rating table, water year 1935-36 except periods of ice effect (gage height,  
in feet, and discharge, in second-feet)  
(Shifting-control method used Aug. 31 to Sept. 30)

0.6	0.7	1.6	37	4.0	240	8.0	660
.8	2.4	2.0	65	5.0	335	9.0	795
1.0	6.8	2.5	105	6.0	435	10.0	960
1.3	20	3.0	150	7.0	545	12.0	1,380

13.0 1,620

Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1							83	589	50	11	3.5	3.8
2							84	523	59	9.6	2.9	6.0
3							83	468	64	8.9	3.8	6.6
4							90	415	67	7.8	11	7.8
5							89	385	59	7.5	7.8	8.6
6							104	395	53	6.8	5.8	8.6
7							222	375	58	6.3	5.8	7.5
8							285	365	67	6.0	6.8	6.5
9							395	345	79	6.0	4.7	6.0
10							490	295	69	6.3	4.7	4.5
11							612	258	60	6.5	4.7	4.2
12							765	240	53	6.3	6.3	4.7
13							1,000	213	51	5.5	6.0	5.2
14							1,160	186	52	5.2	4.7	6.0
15	4.7	8.0					1,290	168	49	4.7	4.5	6.5
16	4.7	8.7					1,430	136	40	3.8	4.7	6.3
17	5.0	8.5					1,500	97	33	3.7	4.0	6.3
18	5.5	8.0					1,470	85	30	3.5	3.7	6.8
19	6.3	8.5					1,380	80	27	3.1	3.8	6.0
20	6.5	9.2	11				1,250	79	24	2.9	4.0	6.0
21	7.2	9.6	11				1,100	81	20	2.8	4.5	6.3
22	6.8	9.2	11				960	95	19	2.6	5.5	5.8
23	6.8	10	11				691	91	18	2.8	6.3	6.0
24		10	11				123	875	86	18	2.8	5.8
25		10	10				118	843	76	18	2.4	5.2
26		9.6	11				105	811	64	16	2.3	5.0
27		10	11				107	723	54	15	3.5	5.5
28		10	11				110	660	51	14	3.7	6.3
29		9	11				113	612	50	12	4.2	5.0
30		9	12				91	589	50	11	3.5	5.0
31		9	9				97	-	49	4.7	5.5	-

Month		Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....		169.8	-	-	5.48	35"
November.....		261.3	-	-	6.71	518
December.....		323	-	-	10.4	641
Calendar year 1935.....		21,653.6	\$11	.7	59.3	42,940
January.....		465	-	-	15	922
February.....		580	-	-	20	1,150
March.....		2,249	-	-	72.5	4,460
April.....		21,846	1,500	83	728	45,330
May.....		6,444	589	49	208	12,780
June.....		1,205	79	11	40.2	2,390
July.....		156.5	11	2.3	5.05	310
August.....		162.8	11	2.9	5.25	323
September.....		210.9	13	3.8	7.03	418
Water year 1935-36.....		34,073.3	1,500	-	93.1	67,580

## ALVORD LAKE BASIN

Trout Creek near Denio, Oreg.

Location.— Water-stage recorder, lat.  $42^{\circ}10'$ , long.  $118^{\circ}28'$ , in SW $\frac{1}{4}$  sec. 26, T. 39 S., R. 36 E., 0.4 mile above bridge at mouth of canyon, 5 miles east of Trout Creek ranch, and 14 miles northeast of Denio.

Records available.— March 1911 to March 1912, April 1922 to November 1923, April 1925 to September 1936 (incomplete prior to 1932).

Discharge.— Maximum discharge during year, 78 second-feet Apr. 24 (gage height, 2.93 feet); minimum, 0.6 second-foot Aug. 8, 9 (gage height, 1.28 feet).

1911-12, 1922-23, 1925-36: Maximum discharge, 343 second-feet Aug. 1, 1933; probably no flow at times.

Maximum stage known, 6.0 feet (caused by cloudburst) between 1922 and 1932.

Remarks.— Records good except those below 2.0 second-feet, those for Nov. 3-16, Dec. 18-27, Sept. 5-30 (estimated on basis of range of stage and weather records), and those for period of ice effect, Jan. 19 to Feb. 28 (computed on basis of two discharge measurements, gage heights, and weather records), which are fair, and those for period of ice effect, Mar. 1 to Apr. 9 (estimated on basis of gage heights and weather records), which are poor. A little water is diverted for irrigating small ranch fields above station; large irrigation diversions below.

## Discharge, in second-feet, water year October 1935 to September 1936

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1.5	4.8	5.1	6.2	3.5			40	40	5.8	0.9	2.1
2	1.8	4.2	4.4	6.0	3.7			36	31	5.1	.9	3.3
3	2.2		4.4	6.3	4.5			30	27	4.0	.9	3.8
4	5.0		5.5	6.5	5.0			35	39	3.7	.8	4.0
5	2.9		6.4	6.5	5.5		4.0	60	31	2.9	.7	
6	2.7		5.8	6.0	5.5			51	31	2.0	.7	
7	2.9		7.6	5.5	4.5			45	33	2.0	.7	
8	2.9		6.9	6.5	3.5			43	30	4.6	.7	
9	2.8		6.9	7.1	4.0			43	26	10.	.6	
10	2.7	5.0	5.8	6.9	4.5		3.7	46	24	7.6	.8	
11	2.8		7.3	7.6	8.0			51	23	6.0	1.7	
12	4.0		6.9	6.0	9.0			51	21	5.5	9.2	
13	4.0		7.1	6.4	7.5			13	21	4.6	3.7	
14	3.5		5.5	6.9	6.0			20	18	4.4	2.2	
15	3.8		3.3	11	5.0			22	16	3.5	1.8	
16	4.4		3.5	8.9	4.8			27	17	2.2	1.5	
17	4.2	5.5	3.5	6.0	4.5			38	45	1.7	1.4	
18	4.0	6.2	3.5	5.8	4.5			48	40	1.8	1.1	
19	4.2	6.4	3.5	7.0	4.5			51	39	1.1	1.2	
20	4.2	5.8	3.7	6.5	5.0			51	37	1.8	1.3	
21	4.0	6.2	3.9	6.0	7.0			55	33	1.2	1.4	
22	4.2	5.8	4.2	5.7	6.5			66	28	1.1	1.2	
23	3.7	6.6	4.5	5.5	5.0			70	27	1.3	1.4	
24	3.8	6.9	5.0	5.5	3.0			70	27	1.0	1.4	
25	4.4	6.6	5.5	5.5	2.0			66	27	1.0	1.0	
26	4.2	6.6	7.0	5.7	2.2			61	24	7.6	1.0	1.0
27	4.0	6.4	6.2	5.5	2.5			60	26	6.4	.8	1.0
28	3.7	6.6	6.0	5.0	2.7			55	24	6.4	.8	1.1
29	4.0	6.2	6.0	4.0	2.8			51	26	6.2	.8	1.5
30	3.8	5.5	6.0	3.5	-			47	23	6.2	.8	1.8
31	2.9	-	6.0	3.5	-			-	31	-	.8	2.1

Month		Second-foot-days	Maximum	Minimum	Mean	Run-off in acre-feet
October.....		107.2	4.4	1.5	3.46	213
November.....		166.3	6.9	-	5.54	330
December.....		166.9	7.6	3.3	5.38	331
Calendar year 1935 .....		7,099.7	141	.9	19.5	14,070
January.....		193.1	11	3.5	6.23	383
February.....		136.7	9.0	2.0	4.71	271
March.....		155	-	-	5.0	307
April.....		923.9	70	3.7	30.8	1,630
May.....		1,241	60	23	40.0	2,460
June.....		576.0	40	6.2	19.2	1,140
July.....		89.2	10	.8	2.88	177
August.....		47.7	9.2	.6	1.54	95
September.....		104.2	-	-	3.47	207
Water year 1935-36.....		3,907.2	70	.6	10.7	7,740

In addition to the records of flow obtained at the gaging stations and reported in the preceding pages, measurements were made at other points, as shown by the following table:

Miscellaneous discharge measurements in the Great Basin during  
the water year October 1935 to September 1936

Bear River Basin				
Date	Stream	Tributary to or diverting from	Locality	Discharge
Oct. 19	Devil Creek (below Evans dividers).	Malad River.....	Sec. 35, T. 13 S., R. 36 E., 3 miles northeast of Malad, Idaho.	Sec.-ft. 2.75
Dec. 19	....do.....	....do.....	....do.....	1.52
Feb. 23	....do.....	....do.....	....do.....	*.01
June 3	....do.....	....do.....	....do.....	7.42
21	....do.....	....do.....	....do.....	4.84
July 24	....do.....	....do.....	....do.....	0
Sept. 12	....do.....	....do.....	....do.....	2.23
26	....do.....	....do.....	....do.....	.35
Oct. 19	Spring Creek (below Evans dividers).	Devil Creek.....	....do.....	2.67
Dec. 19	....do.....	....do.....	....do.....	1.63
Feb. 23	....do.....	....do.....	....do.....	4.19
June 3	....do.....	....do.....	....do.....	6.72
21	....do.....	....do.....	....do.....	5.73
July 24	....do.....	....do.....	....do.....	6.05
Sept. 12	....do.....	....do.....	....do.....	2.30
26	....do.....	....do.....	....do.....	2.97

## Weber River Basin

May 2	Weber-Provo diversion canal	Weber and Provo Rivers.	NW $\frac{1}{4}$ sec. 28, T. 1 S., R. 6 E., about 1,000 feet below canal heading and $1\frac{1}{2}$ miles east of Oakley, Utah.	159
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## Jordan River Basin

Apr. 16	Upper power plant canal.	Salt Creek.....	NE $\frac{1}{4}$ sec. 6, T. 13 S., R. 2 E., about 0.5 mile below canal heading and 5 miles east of Nephi, Utah.	+12.4
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## Salton Sea Basin

May 7	Murray Canyon Creek.	Palm Canyon Creek	Mouth of canyon, near Palm Springs, Calif. Junction with Palm Canyon Creek, near Palm Springs, Calif.	3.5
Dec. 11	....do.....	....do.....	....do.....	.20
Jan. 2	....do.....	....do.....	....do.....	.31
Feb. 5	....do.....	....do.....	....do.....	1.1
16	....do.....	....do.....	....do.....	39
25	....do.....	....do.....	....do.....	12
Mar. 3	....do.....	....do.....	....do.....	5.1
24	....do.....	....do.....	....do.....	2.4
31	....do.....	....do.....	....do.....	24
Apr. 8	....do.....	....do.....	....do.....	14
15	....do.....	....do.....	....do.....	9.7
23	....do.....	....do.....	....do.....	7.2
May 7	....do.....	....do.....	....do.....	2.9
21	....do.....	....do.....	....do.....	.85
25	....do.....	....do.....	....do.....	.85
June 4	....do.....	....do.....	....do.....	.85
May 7	Andreas Canyon Creek.	....do.....	Mouth of canyon, near Palm Springs, Calif.	4.1
Dec. 11	....do.....	....do.....	Junction with Palm Canyon Creek, near Palm Springs, Calif.	.16
Jan. 2	....do.....	....do.....	....do.....	*.05
Feb. 5	....do.....	....do.....	....do.....	.85
16	....do.....	....do.....	....do.....	23
25	....do.....	....do.....	....do.....	6.8
Mar. 3	....do.....	....do.....	....do.....	4.3
24	....do.....	....do.....	....do.....	2.2
31	....do.....	....do.....	....do.....	9.5
Apr. 8	....do.....	....do.....	....do.....	4.1
15	....do.....	....do.....	....do.....	4.8
23	....do.....	....do.....	....do.....	2.7
May 7	....do.....	....do.....	....do.....	2.0
21	....do.....	....do.....	....do.....	.60
27	....do.....	....do.....	....do.....	*.05
June 4	....do.....	....do.....	....do.....	*.1
Aug. 21	....do.....	....do.....	....do.....	1.0
Feb. 5	Tabiquitz Creek	....do.....	....do.....	.32
16	....do.....	....do.....	....do.....	9.2
25	....do.....	....do.....	....do.....	3.6
Mar. 3	....do.....	....do.....	....do.....	1.0
24	....do.....	....do.....	....do.....	6.4
31	....do.....	....do.....	....do.....	6.2
Apr. 8	....do.....	....do.....	....do.....	5.8
15	....do.....	....do.....	....do.....	18
23	....do.....	....do.....	....do.....	28
May 7	....do.....	....do.....	....do.....	20
21	....do.....	....do.....	....do.....	15
27	....do.....	....do.....	....do.....	10
June 4	....do.....	....do.....	....do.....	5.7

\*Estimated.

+About full capacity of canal.

## MISCELLANEOUS DISCHARGE MEASUREMENTS

Miscellaneous discharge measurements in the Great Basin during  
the water year October 1935 to September 1936--Continued

## Mojave River Basin

Date	Stream	Tributary to or diverting from-	Locality	Discharge
				Sec.-ft.
Jan. 3	Mojave River....	Great Basin.....	Near Hodge, Calif.....	*10
24	....do.....	....do.....	....do.....	11
Mar. 12	....do.....	....do.....	....do.....	* 2.0

## Warner Lakes Basin

June 29	Camas Creek.....	Deep Creek.....	Sec. 6, T. 39 S., R. 22 E., near Lakeview, Oreg.	1.0
29	Mud Creek.....	Camas Creek.....	NW $\frac{1}{4}$ sec. 32, T. 38 S., R. 22 E., 1 mile above mouth, near Lakeview, Oreg.	5.4
29	Drake Creek.....	Deep Creek.....	Mouth, sec. 9, T. 39 S., R. 23 E., near Lakeview, Oreg.	6.5

## Malheur and Harney Lakes Basin

June 25	Bear Creek.....	Silvies River....	NW $\frac{1}{4}$ sec. 35, T. 16 S., R. 31 E., near mouth, at Seneca, Oreg.	1.6
25	Poison Creek....	....do.....	SE $\frac{1}{4}$ sec. 16, T. 22 S., R. 31 E., near Burns, Oreg.	1.0

\*Estimated.

## INDEX

Page		Page
Abert Lake Basin, gaging-station records in.....		25
Accuracy of data and computed results.....		
Acre-foot, definition of.....		
Adamsville, Utah, Beaver River at.....		
Adel, Oreg., Deep Creek above.....		
Agencies other than Geological Survey, records by.....		
Alexander, Idaho, Bear River at.....		
Alvord Lake Basin, gaging-station records in.....		
Andreas Canyon Creek, discharge measurements of.....		
Antelope Valley Basin, gaging-station records in.....		
Barstow, Calif., Mojave River at.....		
Bear Creek (Malheur and Harney Lakes Basin), discharge measurement of.		
Bear River Basin, discharge measurements in.....		
Bear River at Alexander, Idaho.....		
near Collinston, Utah.....		
near Evanston, Wyo.....		
near Weston, Idaho.....		
gaging-station records in.....		
Beaver River at Adamsville, Utah.....		
at Rockyford Dam, near Minersville, Utah.....		
near Beaver, Utah.....		
Big Pine, Calif., Owens River near.....		
Bishop, Calif., Owens River near.....		
Pine Creek near.....		
Rock Creek near.....		
Blacksmith Fork above Utah Power & Light Co.'s dam near Hyrum, Utah.....		
Bridgeport, Calif., Bridgeport Reservoir near.....		
East Walker River near.....		
Bridgeport Reservoir near Bridgeport, Calif.....		
Burns, Oreg., Silvies River near.....		
Camas Creek, discharge measurements of.		
Carson River near Fort Churchill, Nev.....		
East Fork of, near Gardnerville, Nev.....		
Cedar City, Utah, Coal Creek near.....		
Chalk Creek at Coalville, Utah.....		
Chewaucan River above Conn Ditch, near Paisley, Oreg.....		
Coal Creek near Cedar City, Utah.....		
Coalville, Utah, Chalk Creek at Weber River near.....		
West Walker River near.....		
Collinston, Utah, Bear River near.....		
Hammond (East Side) Canal near.....		
West Side Canal near.....		
Computations, results of, accuracy of.....		
Control, definition of.....		
Cooperation, record of.....		
Data, accuracy of.....		
explanation of.....		
Deep Creek (Bear River Basin) below First Creek, near Malad, Idaho.....		
Deep Creek (Mojave River Basin) near Hesperia, Calif.....		
Deep Creek (Warner Lakes Basin) above Adel, Oreg.....		
Denio, Oreg., Trout Creek near.....		
Devil Creek (Bear River Basin), discharge measurements of.....		
Devil Creek near Malad, Idaho.....		
Devils Slide, Utah, Weber River at.....		
Donner Creek near Truckee, Calif.....		
Drake Creek, discharge measurement of.		
East Side Canal near Collinston, Utah. See Hammond Canal.		
East Walker River near Bridgeport, Calif.....		
Echo, Utah, Echo Reservoir at.....		
Weber River at.....		
Echo Reservoir at Echo, Utah.....		25
Escalante Desert Basin, gaging-station records in.....		49-50
Evanston, Wyo., Bear River near.....		10
Forks, Utah, Froyo River at.....		35
South Fork of Froyo River at.....		37
Fort Churchill, Nev., Carson River near Gardnerville, Nev., East Fork of Carson River near.....		70
Gateway, Utah, Weber River at.....		69
Great Salt Lake, gages on.....		9
Gunnison, Utah, Sevier River near.....		42
Hammond (East Side) Canal near Collins-ton, Utah.....		20
Harer, Idaho, Bear River at.....		11
Hesperia, Calif., Deep Creek near.....		53
Humboldt, Nev., Humboldt-Lovelock Irrigation, Light & Power Co.'s outlet canal near.....		76
Humboldt-Carson Sink Basin, gaging station records in.....		69-76
Humboldt-Lovelock Irrigation, Light & Power Co.'s outlet canal near.....		76
Humboldt, Nev.....		76
Humboldt River Basin, gaging-station records in.....		71-76
Huntsville, Utah, South Fork of Ogden River near.....		31
Hyrum, Utah, Blacksmith Fork near.....		18
Iceland, Calif., Truckee River at.....		79
Imlay, Nev., Humboldt River near.....		72
Jordan River at Narrows, near Lehi, Utah.....		33
Jordan River Basin, discharge measurement in.....		87
gaging-station records in.....		33-37
Juab, Utah, Sevier Bridge Reservoir near.....		43
Sevier River near.....		44
Kingston, Utah, East Fork of Sevier River near.....		45
Sevier River near.....		38
Lehi, Utah, Jordan River near.....		33
Logan, Utah, Logan, Hyde Park & Smithfield field Canal near.....		17
Logan River near.....		15
Utah Power & Light Co.'s tailrace near.....		16
Logan, Hyde Park & Smithfield Canal near Logan, Utah.....		17
Logan River above State dam near Logan, Utah.....		15
Malad, Idaho, Deep Creek near Devil Creek near.....		22
Malheur & Harney Lakes Basin, discharge measurements in.....		21
gaging-station records in.....		88
Martin Creek near Paradise Valley, Nev.....		85
Marysville, Utah, Piute Reservoir near.....		75
Sevier River near.....		39
Minersville, Utah, Beaver River near.....		40
Mojave River, discharge measurements of.		48
Mojave River at Barstow, Calif.....		55
Mojave River Basin, discharge measurements in.....		54
gaging-station records in.....		88
Mono Lake near Mono Lake, Calif.....		53-55
Mud Creek (Warner Lakes Basin), discharge measurement of.....		64
Murray Canyon Creek (Salton Sea Basin), discharge measurements of.....		88
Nephi, Utah, Salt Creek near.....		87
Nixon, Nev., Pyramid Lake near.....		34
Ogden River near Ogden, Utah. South Fork of, near Huntsville, Utah.....		77
Owens Lake Basin, gaging-station records in.....		32
Owens River at Pleasant Valley, near Bishop, Calif.....		31
near Big Pine, Calif.....		57-63
		59

	Page
Owens River near Round Valley, Calif...	57
Palisley, Oreg., Chewaucan River near...	82
Palisade, Nev., Humboldt River at.....	71
Palm Canyon Creek near Palm Springs, Calif.....	52
Palm Springs, Calif., Palm Canyon Creek near.....	52
Paradise Valley, Nev., Martin Creek near.....	75
Pine Creek at division box, near Bishop, Calif.....	62
near Round Valley, Calif.....	63
Pinto Reservoir near Marysville, Utah...	39
Plain City, Utah, Weber River near....	29
Poison Creek (Malheur and Harney Lakes Basin), discharge measurement of.	88
Provo River at Forks, Utah.....	35
South Fork of, at Forks, Utah.....	37
Publications, information concerning.....	5-6
obtaining or consulting of.....	3-4
on stream flow, lists of.....	3, 4, 6
Pyramid and Winnemucca Lakes Basin, gaging-station records in.....	77-80
Pyramid Lake near Nixon, Nev.....	77
Rock Creek (Antelope Valley Basin) near Valyermo, Calif.....	56
Rock Creek (Owens Lake Basin) at Sherwin Hill, near Bishop, Calif.....	60
near Round Valley, Calif.....	61
Round Valley, Calif., Owens River near Pine Creek near.....	57
Rock Creek near.....	63
Run-off in inches, definition of.....	1
Rye Patch, Nev., Humboldt River near...	74
Rye Patch Reservoir near.....	73
Rye Patch Reservoir near Rye Patch, Nev.	73
Salt Creek (Jordan River Basin), dis- charge measurement of upper power-plant canal diverting from.	87
Salt Creek near Nephi, Utah.....	34
Salton Sea, Calif.....	51
Salton Sea Basin, gaging-station records in.....	51-52
discharge measurements in.....	87
Second-feet per square mile, definition of.....	1
Second-foot, definition of.....	1
Second-foot-day, definition of.....	1
Sevier Lake Basin, gaging-station records in.....	38-45
Sevier River below Piute Dam, near Marysville, Utah.....	40
below San Pitch River, near Gunnison, Utah.....	42
Sewier River near Juab, Utah.....	44
near Kingston, Utah.....	38
near Vermilion, Utah.....	41
East Fork of, near Kingston, Utah.....	45
Sevier Bridge Reservoir near Juab, Utah	43
Silver Lake, Oreg., Silver Creek near near.....	83
Silver Lake Irrigation District Canal	84
near.....	84
Silver Lake Irrigation District Canal near Silver Lake, Oreg.....	84
Silver Lake Basin, gaging-station records in.....	83-84
Silver Creek near Silver Lake, Oreg.....	83
Silvies River near Burns, Oreg.....	85
Spring Creek (Bear River Basin), dis- charge measurements of.....	87
Stage-discharge relation, definition of	1
Tahoe, Calif., Truckee River at.....	78
Tahquitz Creek, discharge measurements of.....	87
Terms, definition of.....	1
Topaz, Calif., Topaz Reservoir near.....	68
Trout Creek near Denio, Oreg.....	86
Truckee, Calif., Donner Creek near.....	80
Truckee River at Iceland, Calif.....	79
at Tahoe, Calif.....	78
Utah Power & Light Co.'s tailrace near Logan, Utah.....	16
Valyermo, Calif., Rock Creek near.....	56
Vermilion, Utah, Sevier River near.....	41
Victorville, Calif., Mojave River at.....	54
Walker Lake Basin, gaging-station records in.....	65-68
Warner Lakes Basin, gaging-station records in.....	81
discharge measurements in.....	88
Weber-Provo diversion canal, discharge measurement of.....	87
Weber-Provo diversion canal near Wood- land, Utah.....	36
Weber River at Devil's Slide, Utah.....	27
at Echo, Utah.....	26
at Gateway, Utah.....	28
near Coalville, Utah.....	24
near Oakley, Utah.....	23
near Plain City, Utah.....	29
Weber River Basin, discharge measure- ment in.....	87
gaging-station records in.....	23-32
Weston, Idaho, Bear River near.....	13
West Side Canal near Collinston, Utah.....	19
West Walker River near Coleville, Calif.	67
Woodland, Utah, Weber-Provo diversion canal near.....	36
Work, division of.....	8
scope of.....	1



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